Action 1143

Doc. No.: CLET-00532-12.01-02/03/86

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

FEB 3 1986

REF: 4WD-ER

Commander
Atlantic Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511- 6287

Attention: J. R. Bailey, P.E.
Environmental Quality Branch

Dear Sir:

On November 1, 1985, Messrs. Mathis and Holdaway of this Agency met with Facilities Engineering Staff at MCB Camp Le Jeune to review activities and progress in assessment of past waste disposal practices through the NACIP program. During the course of discussion, the subject of ground water quality, and particularly the quality of the water obtained from wells in the Hadnot Point Area of Camp Le Jeune, was reviewed at some length.

Both Messrs. Holdaway and Mathis became aware that there was evidence, from sampling as early as 1983 or 1984, of diffuse contamination of the ground water with unspecified organic substances, and that as a result of detection of unspecified volatile organic compounds in raw potable water samples certain potable wells at Hadnot Point were taken out of service. In consideration of the fact that the major portion of the resident population of Camp Le Jeune, is dependent on the Hadnot Point well field as its potable water supply, the parties in the meeting agreed that any potential contamination of this resource should be investigated as expeditiously as practical. It was also established that there was no contamination detected in treated potable water distributed at Camp Le Jeune, however the extent and sensitivity of analytic procedures for specific organic substances was not fully discussed.

Mr. Mathis suggested it would be desirable to analyze ground water samples from the monitoring wells involved in the NACIP confirmation studies for the 129 priority pollutants (CFR261 Appendix 8), and that the same analysis should be performed on raw water from all potable wells to insure that there was no contamination of the Camp Le Jeune water supply. When EPA informally requested a copy of the analytical results from monitoring wells and potable wells, we were advised that these data were still in raw form and under review.

If these data are now available, please furnish us a copy. If these data have not been published yet, we would appreciate a brief description of what substances were analyzed, what substances were detected, and when the data will be available.

DOC NO: CLEJ-OR532-12.01-02/03/86

This Agency is concerned that a potential for human exposure to hazardous substances and hazardous wastes via the Camp Le Jeune water supply may exist due to the presence of such materials in ground water in the general vicinity of the potable well field. The existance of such a potential exposure would warrent consideration of this area for inclusion on the National Priority List, with an attendant increase in the expediency of investigation and remediation.

We appreciate your assistance in obtaining these data in order that this potentially significant problem may be addressed.

If you have any questions, please do not hesitate to contact me at (404) 347-3776 or FTS 257-3776.

Sincerely,

Arthur G. Linton

Arthur G. Linton, P.E.
Regional Federal Facilities Coordinator
Environmental Assessment Branch
Office of Policy and Management

cc: Commander, MCS Camp Le Jeune
Lee Herwig
Paul Hubbell, Navy Department, Washington, DC

Doc. No.: CLEJ-00533-12.01-05/01/91

State of North Carolina
Department of Environment, Health, and Natural Resources
Division of Solid Waste Management
P.O. Box 27687 · Raleigh, North Carolina 27611-7687

James G. Martin, Governor
William W. Cobey, Jr., Secretary

William L. Meyer
Director

1 May 1991

Laurie A. Boucher
Atlantic Division Naval Facilities
Engineering Command
Code 1822
Norfolk, Virginia 23511-6287

Subject: Camp LeJeune
State Regulations

Dear Ms. Boucher:

As requested, you will find enclosed copies of the following documents:

1. 15ANCAC2B.0100-Procedure for Assignment of Water Quality Standards.
2. 15ANCAC2B.0200-Classifications and Water Quality Standards Applicable to Surface Waters of North Carolina.
3. 15ANCAC2B.0400-Effluent Limitations.
4. 15ANCAC2B.0500-Surface Water Monitoring: Reporting.
5. 15NCAC2C.0100-Criteria and Standards Applicable to Water Supply and Certain Other Types of Wells.
6. 15ANCAC2D-Air Pollution Control Requirements.
7. 15ANCAC2H-Procedures for Permits, Approvals.
8. 15ANCAC2H.0600-Air Quality Permits.

Doc. No.: CLEJ-00097-12.01-04/14/9

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

APR 14 1992

4WD-RCRA/FF

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Byron Brant
Department of the Navy - Atlantic Division
Naval Facilities Engineering Command
Code 1822
Norfolk, Virginia 23511-6287

RE: Marine Corps Base Camp Lejuene NPL Site
Jacksonville, North Carolina

Dear Mr. Brant:

This letter is in response to Mr. P. A. Rakowski's letter dated April 6, 1992 in reference to the treatment of TCE contaminated groundwater from the Hadnot Point shallow aquifer.

I have consulted with our RCRA experts and offer the following position on this issue. If the wastewater enters a surface impoundment at any time in the treatment process the RCRA regulations would apply a "Applicable or Relevant and Appropriate" (ARARs) that must be met by the treatment process. Section 121(e) of CERCLA states:

> Permits and Enforcement. (1) No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely onsite, where such remedial action is selected and carried out in compliance with this section.

It will be necessary to meet the substantive technical requirements of CFR 264.

If you have any questions or comments, please call me at (404) 347-3016.

Sincerely,

Michelle M. Glenn

Michelle M. Glenn
Senior Project Manager

cc: Jack Butler, NCDEHNR
George Radford, MCB Camp Lejeune

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Mr. Byron Bartl
ATLANTIC DIVISION
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Doc No: AL EJ - 00097 - 18.01 - 4/14/92

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 300

The National Priorities List for Uncontrolled Hazardous Waste Sites - Listing Policy for Federal Facilities

AGENCY: Environmental Protection Agency

ACTION: Notice of Policy Statement

SUMMARY: The Environmental Protection Agency ("EPA") is announcing a policy relating to the National Oil and Hazardous Substances Contingency Plan ("NCP"), 40 CFR Part 300, which was promulgated pursuant to section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA") (amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA")) and Executive Order 12580 (52 FR 2923, January 29, 1987). CERCLA requires that the NCP include a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States, and that the list be revised at least annually. The National Priorities List ("NPL"), initially promulgated as Appendix B of the NCP on September 8, 1983 (48 FR 40658), constitutes this list.

This notice describes a policy for placing on the NPL sites located on Federally-owned or -operated facilities that meet the NPL eligibility criteria set out in the NCP, even if the Federal facility is also subject to the corrective action authorities of Subtitle C of the Resource Conservation and Recovery Act ("RCRA"). EPA had requested public comment on this policy on May 13, 1987 (52

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FR 17991); comments received are contained in the Headquarters Superfund Public Docket. Elsewhere in today's Federal Register is a rule adding Federal facility sites to the NPL in conformance with this policy.

EFFECTIVE DATE: This policy is effective immediately.

ADDRESSES: The Headquarters Superfund Public Docket is located at the U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. It is available for viewing "by appointment only" from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding Federal holidays. Telephone 202/382-3046.

FOR FURTHER INFORMATION CONTACT: Joseph Kruger, Hazardous Site Evaluation Division, Office of Emergency and Remedial Response (OS-230), U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460, or the Superfund Hotline, phone (800) 424-9346 (or 382-3000 in the Washington, DC, metropolitan area).

SUPPLEMENTARY INFORMATION:

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01/01/01

I. Introduction

In 1980, Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. Sections 9601-9657 (CERCLA or "the Act"), in response to the dangers of uncontrolled or abandoned hazardous waste sites. CERCLA was amended in 1986 by the Superfund Amendments and Reauthorization Act ("SARA"), Public Law No. 99-499, 100 Stat. 1613 et seq. To implement CERCLA, the Environmental Protection Agency ("EPA" or "the Agency") promulgated the revised National Oil and Hazardous Substances Contingency Plan ("NCP"), 40 CFR Part 300, on July 16, 1982 (47 FR 31180), pursuant to CERCLA section 105 and Executive Order 12316 (46 FR 42237, August 20, 1981). The NCP, further revised by EPA on September 16, 1985 (50 FR 37624) and November 20, 1985 (50 FR 47912), sets forth guidelines and procedures needed to respond under CERCLA to releases and threatened releases of hazardous substances, pollutants, or contaminants. In response to SARA, EPA proposed revisions to the NCP on December 21, 1988 (53 FR 51394).

Section 105(a)(8)(A) of CERCLA, as amended by SARA, requires that the NCP include criteria for "determining priorities among releases or threatened releases throughout the United States for the purpose of taking remedial action and, to the extent practicable taking into account the potential urgency of such action, for the purpose of taking removal action." Removal action involves cleanup or other actions that are taken in response to

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releases or threats of releases on a short-term or temporary basis (CERCLA section 101(23)). Remedial action tends to be long-term in nature and involves response actions which are consistent with a permanent remedy for a release (CERCLA section 101(24)). Criteria for determining priorities for possible remedial actions under CERCLA are included in the Hazard Ranking System ("HRS"), which EPA promulgated as Appendix A of the NCP (47 FR 31219, July 16, 1982).[1]

Section 105(a)(8)(B) of CERCLA, as amended by SARA, requires that the statutory criteria provided by the HRS be used to prepare a list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States. The list, which is Appendix B of the NCP, is the National Priorities List ("NPL"). Section 105(a)(8)(B) also requires that the NPL be revised at least annually.

A site can undergo CERCLA-financed remedial action only after it is placed on the final NPL as provided in the NCP at 40 CFR 300.66(c)(2) and 300.68(a). Although Federal facility sites are eligible for the NPL pursuant to the NCP at 40 CFR 300.66(c)(2), section 111(e)(3) of CERCLA, as amended by SARA, limits the expenditure of Superfund monies at Federally-owned facilities. Federal facility sites also are subject to the requirements of CERCLA section 120, added by SARA.

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[1] EPA proposed major revisions to the HRS on December 23, 1988 (53 FR 51962); however, the current HRS applies to the listing of sites on the NPL until the revised HRS is finalized and takes effect. CERCLA section 105(c)(1).

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This notice announces the Agency's policy of including on the NPL Federal facility sites that meet the eligibility requirements (e.g., an HRS score of 28.50), even if such facilities are also subject to the corrective action authorities of Subtitle C of the Resource Conservation and Recovery Act ("RCRA"), 42 U.S.C. 6901-6991(i). Elsewhere in today's Federal Register EPA is adding Federal facility sites to the NPL in conformance with this policy.

II. Development of the Policy for Listing Federal Facility Sites

CERCLA section 105(a)(8)(B) directs EPA to list priority sites "among" the known releases or threatened releases of hazardous substances, pollutants, or contaminants, and section 105 (a)(8)(A) directs EPA to consider certain enumerated and "other appropriate" factors in doing so. Thus, as a matter of policy, EPA has the discretion not to use CERCLA to respond to certain types of releases.

When the initial NPL was promulgated (48 FR 40662, September 8, 1983), the Agency announced certain listing policies relating to sites that might qualify for the NPL. One of these policies was that RCRA land disposal units that received hazardous waste after July 26, 1982 (the effective date of the RCRA land disposal regulations) would generally not be included on the NPL. On April 10, 1985 (50 FR 14117), the Agency announced that it was considering revisions to that policy based upon new authorities of the Hazardous and Solid Waste Amendments of 1984 ("HSWA") that allow the Agency to require corrective action at solid waste

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management units of RCRA facilities in addition to regulated hazardous waste management units.

On June 10, 1986 (51 FR 21057), EPA announced several components of a final policy for placing RCRA-regulated sites on the NPL, but made clear that the policy applied only to non-Federal sites. The policy stated that the listing of non-Federal sites with releases that can be addressed under the expanded RCRA Subtitle C corrective action authorities generally would be deferred. However, certain RCRA sites at which Subtitle C corrective action authorities are available would generally be listed if they had an HRS score of 28.50 or greater and met at least one of the following criteria:

- Facilities owned by persons who have demonstrated an inability to finance a cleanup as evidenced by their invocation of the bankruptcy laws.
- Facilities that have lost authorization to operate, and for which there are additional indications that the owner or operator will be unwilling to undertake corrective action.
- Sites, analyzed on a case-by-case basis, whose owners or operators have a clear history of unwillingness to undertake corrective action.[2]

On June 10, 1986 (51 FR 21059), EPA stated that it would consider at a later date whether this revised policy for deferring non-Federal RCRA-regulated sites from the NPL should apply to Federal facilities.

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[2] On August 9, 1988, (53 FR 30002/30005), EPA published additional information on Agency policy concerning criteria to determine if an owner or operator is unwilling or unable to undertake corrective action.

On October 17, 1986, SARA took effect, adding a new section 120 to CERCLA devoted exclusively to Federal facilities. Section 120 explains the applicability of CERCLA to the Federal Government, and generally sets out a scheme under which contaminated Federal facility sites should be included in a special docket, evaluated, placed on the NPL (if HRS scores so warrant), and addressed pursuant to an Interagency Agreement with EPA.

As part of its deliberations on a Federal facilities listing policy, EPA considered pertinent sections of SARA and the proposed policy concerning RCRA corrective action at Federal facilities with RCRA-regulated hazardous waste management units (51 FR 7722, March 5, 1986). Specifically, that policy stated that:

- RCRA Section 3004(u) subjects Federal facilities to corrective action requirements to the same extent as privately-owned or -operated facilities.
- The definition of a Federal facility boundary is equivalent to the property-wide definition of facility at privately-owned or -operated facilities.

The Agency determined that the great majority of Federal facility sites that could be placed on the NPL have RCRA-regulated hazardous waste management units within the Federal facility property boundaries, subjecting them to RCRA corrective action authorities. Therefore, application to Federal facilities of the March 5, 1986 boundary policy and the June 10, 1986 RCRA deferral policy would result in placing very few Federal facility sites on the NPL. However, CERCLA and its legislative history indicate that Congress clearly intended that Federal facility sites generally be placed on the NPL and addressed under the process set out in CERCLA

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section 120(e). Thus, EPA concluded that the RCRA deferral policy applicable to private sites might not be appropriate for Federal facilities. On May 13, 1987 (52 FR 17991), the Agency announced that it was considering adopting a policy for listing Federal facility sites that are eligible for the NPL, even if they are also subject to the corrective action authorities of Subtitle C of RCRA; public comment was specifically requested on this approach.

Congress' intent that Federal facility sites should be on the NPL, even if RCRA corrective action authorities apply, is evidenced by the nature of the comprehensive system of site identification and evaluation set up by CERCLA section 120, added by SARA. First, in section 120(c), EPA is required to establish a "Federal Agency Hazardous Waste Compliance Docket," based on information submitted under sections 103 and 120(b) of CERCLA, and sections 3016, 3005, and 3010 of RCRA.[3] Thus, the docket is based heavily on information provided by Federal facilities that are subject to RCRA. If Congress had intended that Federal facilities subject to RCRA authorities should not also be examined under the Federal facility provisions of CERCLA, then the legislators would not have directed EPA to develop a docket of facilities (for

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[3] Section 3016 of RCRA provides for the inventory of Federal sites where RCRA hazardous waste "is stored, treated, or disposed of or has been disposed of at any time"; section 3005 of RCRA requires the filing of information necessary for the issuance of permits (or the obtaining of interim status) to treat, store, or dispose of hazardous waste under RCRA; and RCRA section 3010 requires notifications that a RCRA hazardous waste is being generated, transported, treated, stored, or disposed of.

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evaluation under CERCLA) composed largely of Federal facilities subject to RCRA.

Second, the Agency is also directed, in CERCLA section 120(d), to "take steps to assure that a preliminary assessment is conducted for each facility on the docket," and where appropriate, to include such facilities on the NPL if the facility meets "the criteria established in accordance with section 105 under the National Contingency Plan for determining priorities among releases." (EPA does apply the CERCLA section 105 criteria -- the Hazard Ranking System (HRS) -- to Federal, as well as private, sites.) Here again, if Congress had intended that Federal facilities subject to RCRA authorities not be placed on the NPL, then the legislators would not have required EPA to evaluate for the NPL all Federal facilities in the docket -- the large majority of which are subject to RCRA authorities.

Third, Congress set up the Interagency Agreement (IAG) process (CERCLA section 120(e)(2)-(4)) to evaluate the need for cleanups of Federal facility sites. If all Federal facility sites subject to RCRA Subtitle C were deferred from listing and attention under CERCLA, few Federal sites would come within the IAG process, contrary to Congressional intent.

Rather, Congress intended that EPA list, and evaluate in the IAG process, all Federal facility sites that are eligible for the NPL, including those facilities subject to RCRA Subtitle C authorities. As Senator Robert T. Stafford stated during the floor debate on section 120 of SARA (subsequently section 120 of CERCLA):

> [T]he amendments require a comprehensive nationwide effort to identify and assess all Federal hazardous waste sites that warrant attention. 132 Cong. Rec. S 14902 (daily ed., October 3, 1986) (emphasis added).

EPA has long expressed the view that placing Federal facility sites on the NPL serves an important informational function and helps to set priorities and focus cleanup efforts on those Federal sites that present the most serious problems (50 FR 47931, November 20, 1985).

EPA believes that today's decision not to apply the June 1986 NPL/RCRA policy (for non-Federal sites) to Federal facilities is consistent with section 120(a)(2) of CERCLA, which provides that "all guidelines, rules, regulations and criteria which are applicable to ... inclusion on the National Priorities List, or applicable to remedial actions ... shall also be applicable to [Federal facilities]." Given Congressional intent that Federal facility sites should be included on the NPL, EPA interprets section 120(a)(2) to mean that the criteria to list sites should not be more exclusionary than the criteria to list non-Federal sites on the NPL. As discussed in the May 13, 1987, notice on the policy (52 FR 17992-3), most Federal facilities include RCRA-regulated hazardous waste management units and thus, almost all waste contamination areas within facility boundaries are subject to RCRA corrective action authorities; in addition, key exclusions in the non-Federal RCRA deferral policy are not applicable to Federal facilities. Thus, if the non-Federal RCRA deferral policy were applied to Federal sites, very few Federal sites would be listed.

The Agency believes that although section 120(a)(2) evidences Congress' intent that the Federal agencies comply with the same baseline of requirements applicable to private sites, the section does not require that all policies and requirements applicable to private and Federal facility sites be identical. Indeed, Congress specifically set out a series of requirements which apply to Federal facilities in a manner different from, or in addition to, those applicable to private sites, e.g., the preparation of a separate Federal Agency Hazardous Waste Compliance Docket (section 120(c)); the notification required before Federal agencies may transfer property (section 120(h)); and the entire process for signing Interagency Agreements at Federal facility sites (section 120(e)(2)-(4)).

Just as Congress recognized that there are unique aspects of Federal facilities requiring additional or special attention in the contexts just named, special attention is also required in deciding what listing/deferral policy should apply to Federal versus private sites. EPA's opinion is that significant differences inherent in the rules to which Federal facility sites and private sites are subject under CERCLA and the NPL dictate that different listing and deferral policies should be crafted for each class of facilities.

For private sites, the only legal significance of NPL listing is that the site becomes eligible for Fund-financed remedial action, as provided in the NCP at 40 CFR 300.66(c)(2) and 300.68(a)(1) (removal actions and enforcement actions can be taken at private sites regardless of NPL status). Indeed, EPA recently

suggested in the preamble to proposed revisions to the NCP (53 FR 51416, December 21, 1988) that it may be appropriate to view the non-Federal NPL "as a list for informing the public of hazardous waste sites that appear to warrant ... remedial action through CERCLA funding alone." This relationship between the NPL and the availability of Fund monies (at private sites) is a central factor behind EPA's deferral policies. EPA has concluded that by deferring to other statutes like RCRA, "a maximum number of potentially hazardous waste sites can be addressed and EPA can direct its CERCLA efforts (and Fund monies, if necessary) to those sites where remedial action cannot be achieved by other means" (53 FR 51415, December 21, 1988). However, this goal of maximizing the use of limited Fund monies does not apply to Federal facility sites.

Federal facility sites on the NPL are not eligible for Fund-financed remedial actions (except in the very limited cases described in CERCLA section 111(e)(3)), pursuant to the NCP at 40 CFR 300.66(c)(2). Thus, the deferral of Federal facility sites from the NPL would not result in significant economies to the Fund, although it could do harm to the informational and management goals of including Federal facility sites on the NPL, as well as Congressional intent. Although the Agency might have decided to defer Federal facility sites subject to RCRA based on a desire to avoid duplication in remedial actions (another of the purposes behind RCRA deferral for private sites), EPA has concluded that this goal may be accomplished satisfactorily for Federal facilities

through the process, set out in CERCLA section 120(e)(2)-(e)(4), of developing comprehensive IAGs. As discussed in detail below, EPA will attempt to use the IAG process to achieve efficient, comprehensive solutions to site problems, and where appropriate, to divide responsibilities for cleanup among the various applicable authorities.

Finally, the deferral of Federal facility sites to RCRA-authorized States, in lieu of evaluation under the IAG process, may be inconsistent with the intent of CERCLA section 120(g), which provides that "no authority vested in the [EPA] Administrator under this section [120] may be transferred" to any person. 42 U.S.C. 9620(g).

III. Coordination of Response Authorities at Federal Facility Sites on the NPL

EPA recognizes that when it takes action under CERCLA to address a facility that is also subject to RCRA authorities, there is some risk of overlap or even conflict. Such conflict situations are not a problem where EPA is responsible for carrying out the requirements of both RCRA and CERCLA (since any jurisdictional overlaps can be managed within EPA). However, an overlap of authority may yield disagreements as to how a site should be cleaned up where a State has been authorized to carry out all or part of the RCRA program.[4]

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[4] EPA recognizes that many States have hazardous waste laws independent of that upon which the State's authorized RCRA program may be based. Although this policy statement focuses primarily on the mechanism for applying RCRA (by EPA or authorized States) to Federal facilities on the NPL, the same analysis would apply to non-RCRA State laws that potentially overlap with CERCLA response

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However, this potential overlap between RCRA and CERCLA cleanup authorities is the result of Congressional design, not site listings. EPA neither intends nor believes that site listings themselves create a conflict between CERCLA and RCRA (or State law); rather, any conflict stems from the overlap of the corrective action authorities of the two statutes. The overlap exists whenever EPA takes CERCLA action at a site that has regulated hazardous waste management units subject to a State's RCRA program or other State law. EPA can take such CERCLA actions at sites not on the NPL as well as at sites on the NPL.[5] (Such conflicts may also occur at private sites as well as at Federal facility sites.) There may also be cases where the applicability of both RCRA and CERCLA authorities at NPL sites does not create a conflict--for example, where the RCRA hazardous waste management units are not included within the area to be addressed under CERCLA, or where the release is exempt from action under RCRA. Thus, conflict between RCRA and CERCLA corrective actions can occur at virtually any point in the process or not at all.

How RCRA authorities are affected (if at all) when CERCLA also applies to a site is a matter that varies greatly, depending upon the facts of the site. In some cases, the NPL site is physically distinct from the RCRA-regulated hazardous waste management units, and corrective action or closure at the regulated units may proceed

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authorities.

[5] Removal actions, as well as remedial actions ordered under section 106 of CERCLA, may be taken at non-NPL sites. See 40 CFR 300.66(c)(2) and 300.68(a)(1).

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under RCRA, while at the same time a cleanup action is proceeding at another area of the property under CERCLA, without the risk of inconsistency or duplication of response action. In other cases, the releases or contaminant plumes may overlap, such that a comprehensive solution under one statute may be the most efficient and desirable solution. The questions of which authority should control, and of how to avoid potential duplication or inconsistency, are often implementation issues, to be resolved in light of the facts of the case and after consultation between EPA and the concerned State.

EPA's belief is that in most situations, it is appropriate to address sites comprehensively under CERCLA, pursuant to an enforceable agreement (i.e., an IAG under CERCLA section 120), signed by the Federal facility, EPA, and, where possible, the State. In some circumstance, it may be appropriate under an IAG to divide responsibilities, focusing CERCLA activity only on certain prescribed units, leaving the cleanup of other units under the direct control of RCRA authorities, such as where the RCRA-regulated hazardous waste management unit is physically distinct from the CERCLA contamination and its cleanup would not disrupt CERCLA activities. Alternatively, the IAG can prescribe divisions of responsibility, such as stating that CERCLA will address ground water contamination while RCRA will address the closure of regulated hazardous waste management units. Any disagreements in the implementation of the IAG would be resolved by the signatory parties under the dispute resolution terms of the IAG.

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Of course, there may be cases where a RCRA-authorized State declines to join the IAG process, or agreement on the terms of an IAG cannot be achieved. For instance, State officials may decide that the proper closure of a landfill should be accomplished through excavation, while CERCLA officials may determine that the same area should be managed differently as part of a comprehensive CERCLA action at the site. Although EPA will try to resolve any such conflicts and achieve agreement with the State in the IAG process, there may be cases where the conflicting views of EPA and the State concerning corrective action cannot be resolved.

CERCLA section 122(e)(6), entitled "inconsistent response actions," gives specific guidance on this point:

> INCONSISTENT RESPONSE ACTION. -- When either the President, or a potentially responsible party pursuant to an administrative order or consent decree under this Act, has initiated a remedial investigation and feasibility study [RI/FS] for a particular facility under this Act, no potentially responsible party may undertake any remedial action at the facility unless such remedial action has been authorized by the President.

As the Conference Report on SARA noted, section 122(e)(6) was included in the bill "to clarify that no potentially responsible party [PRP] may undertake any remedial action at a facility unless such remedial action has been authorized by the President" (or his delegate, EPA[6]). See H.R. Rep. 962, 99th Cong., 1st Sess. at 254

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6 The authority under section 122(e)(6) to authorize a remedial action to continue after the initiation of an RI/FS at an NPL site has been delegated to the EPA Administrator. See Executive Order 12580, section 4(d)(1) (52 FR 2923, January 29, 1987). For most non-NPL sites, the general authority for carrying out the requirements of CERCLA section 122 has been delegated to the Federal agencies for sites under their jurisdiction or control;

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(1986). See also 132 Cong. Rec. S 14919 (daily ed., October 3, 1986) ("This is to avoid situations in which the PRP begins work at a site that prejudges or may be inconsistent with what the final remedy should be or exacerbates the problem.")[7] This authorization requirement applies to any remedial actions taken by a PRP, including those actions ordered by a State, as both types of action could be said to present a potential conflict with a CERCLA-authorized action.[8]

CERCLA section 122(e)(6) does not constitute a prohibition on RCRA corrective action at CERCLA sites; rather, it provides a

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however, the ability of the Federal agencies to authorize sites under section 122(e)(6) is limited by the provisions of section 120(a)(4), as discussed below.

[7] Congress' intent that CERCLA actions should proceed without potential conflict with other remedial action is also suggested by the language in section 7002(b)(2)(B) of RCRA, which states that RCRA citizen suits alleging an imminent and substantial endangerment may not be brought if EPA: has commenced an action under CERCLA section 106 (or RCRA 7003); is engaging in a removal action under CERCLA section 104; or has incurred costs to begin an RI/FS under CERCLA and is diligently proceeding with remedial action; or has obtained a court order (including a consent decree) or issued an administrative order under CERCLA section 106 or RCRA section 7003, and a responsible party is diligently conducting a removal, an RI/FS, or proceeding with remedial action pursuant to that order. Similarly, RCRA section 1006(b) directs the Administrator to "integrate all provisions of [RCRA] for purposes of administration and enforcement and shall avoid duplication to the maximum extent practicable," with appropriate provisions of laws (such as CERCLA) granting regulatory authority to EPA.

[8] "Remedial action" is very broadly defined in section 101(24) of CERCLA as actions consistent with a permanent remedy at a site, including confinement of a release of hazardous substances, cleanup of hazardous substances, etc. EPA believes that remedial actions within the meaning of the term may include those taken under statutes other than CERCLA, including corrective action under RCRA.

DOC NO: CLEJ-00544-12-0,1

mechanism by which the Agency must approve of remedial actions commenced at sites after an RI/FS has been initiated under CERCLA. Such an approach would help to avoid duplicative and wasteful cleanup actions. This authorization mechanism would not affect normal hazardous waste management requirements under RCRA, such as complying with manifest, 90-day storage, and labeling requirements; any RCRA-regulated hazardous waste management units operating at a CERCLA site must continue to comply with RCRA hazardous waste management requirements, even if a CERCLA response action is underway. The Agency also intends to authorize many State RCRA actions to continue, e.g., where the RCRA action addresses a unit distinct from the CERCLA contamination, and where the RCRA action will not disrupt CERCLA activities.

Even where EPA decides that it is not appropriate to authorize a RCRA or other State action to continue under CERCLA section 122(e)(6) in order to avoid disruption or duplicative actions, CERCLA section 120(f) specifically provides that participation by State officials in remedy selection "shall be provided in accordance with section 121," and CERCLA section 121(d) specifically provides a process for taking account of "applicable or relevant and appropriate requirements" (ARARs) of RCRA (as well as other State and Federal statutes) when a remedy is selected. If any State requirements are waived pursuant to CERCLA section 121(d)(4), the affected State may obtain judicial review of such waiver, and even if unsuccessful, may ensure that those requirements are met by providing the necessary additional funding

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pursuant to CERCLA section 121(f)(3)(B). As the Agency has noted repeatedly in the past, "it is EPA's expectation that remedies selected and implemented under CERCLA will generally satisfy the RCRA corrective action requirements, and vice versa" (52 FR 17993, May 13, 1987, and 52 FR 27645, July 22, 1987).[9]

The discretion under CERCLA section 122(e)(6) not to authorize a PRP to go forward with a remedial action at a site after a CERCLA remedial investigation/feasibility study (RI/FS) has begun -- even if that action has been ordered by a State -- is generally available at both private and Federal facility sites. However, CERCLA section 120(a)(4) provides that State laws shall apply to remedial actions -- including those under CERCLA -- at Federal facility sites that are not on the NPL, thus, acting as a general limitation on the more general section 122(e)(6).[10] Of course, no such limitation applies to Federal facility sites once they are placed on the NPL.

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[9] To the extent that this policy may be read as inconsistent with the district court's opinion in State of Colorado v. U.S. Department of the Army, C.A. No. 86-C-2524 (D. Colo., February 24, 1989), EPA disagrees with that opinion.

[10] Section 120(a)(4) states as follows:

> State laws concerning removal and remedial action, including State laws regarding enforcement, shall apply to removal and remedial action at facilities owned or operated by a department, agency, or instrumentality of the United States when such facilities are not included on the National Priorities List. [Emphasis added.]

Nothing in this section prevents Federal facilities from arguing that the doctrines of laches, estoppel or implied preemption limit the effect of section 120(a)(4).

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The plain language of section 122(e)(6) makes it clear that it is the RI/FS -- not the listing itself -- that triggers section 122(e)(6). Indeed, an RI/FS may be commenced prior to, as well as after, NPL listing.[11] This is especially true for Federal facility sites, as the President has delegated his authority to take CERCLA section 104 response actions (including RI/FSs) to the Federal agencies for most non-NPL sites (Executive Order 12580, at section 2(e)(1)).[12] Thus, when a Federal facility is placed on the NPL, an RI/FS will often have been commenced (or completed).

In order to invoke the authorization mechanism of CERCLA section 122(e)(6), EPA must make a threshold determination of whether or not an RI/FS "under this Act [CERCLA]" has been initiated; studies conducted by Federal facilities before a site has been placed on the NPL may or may not constitute an appropriate RI/FS in EPA's opinion.[13] As a matter of policy, the Agency will generally interpret CERCLA-quality RI/FSs to be those

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11 See SCA Services of Indiana, Inc. v. Thomas, 634 F.Supp. 1355, 1381 (W.D. Ind. 1986) ("CERCLA clearly makes the conduct of an RI/FS a removal, not remedial, action, so that the restriction that remedial actions be taken only when the site is on the NPL is simply irrelevant to a RI/FS"); 52 FR 27622 (July 22, 1987) ("an RI/FS can be performed at proposed [NPL] sites pursuant to the Agency's removal authority under CERCLA").

12 Section 104 authorities were delegated to the Departments of Defense and Energy more generally, although such functions must still be exercised consistent with the requirements of section 120 of CERCLA. Executive Order 12580, section 2(d).

13 "RI/FS" is a term of art under CERCLA, and applies to a special site study and evaluation pursuant to section 300.68(d) of the NCP. EPA, as the agency entrusted with the development and implementation of the NCP, is the recognized expert on what constitutes an acceptable RI/FS under CERCLA.

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that are provided for, or adopted by reference, in an IAG. The Agency believes that such a policy is consistent with CERCLA section 120(e)(1), which directs Federal facilities, "in consultation with EPA," to commence an RI/FS within six months of the facility's listing on the NPL. In addition, the policy will promote consistency in RI/FS's, and will help to ensure that all appropriate information has been collected during the RI/FS, so that EPA may properly evaluate remedial alternatives at Federal facility sites as required under CERCLA section 120(e)(4). Further, by encouraging the development of IAGs at the early RI/FS stage, this policy may help to promote coordination among the parties, and avoid inconsistent actions.

Thus, the IAG will generally commit the Federal facility to complete both an RI/FS and any subsequent remedial action determined by EPA to be necessary.

Once an RI/FS has been commenced under (or incorporated into) an IAG, EPA must decide whether or not to authorize PRPs to continue with any non-CERCLA remedial actions (both voluntary and State-ordered) at the site. This decision will be made on a case-by-case basis, taking into account the status of CERCLA activities at the site, and the potential for disruption of or conflict with that work if the PRP action were authorized.

IV. Response to Public Comments

On May 13, 1987 (52 FR 17991), EPA solicited public comment on the Agency's intention to adopt a policy for including eligible Federal facility sites on the NPL, even if they are also subject to

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RCRA corrective action authorities; the Agency received six comments on the policy. EPA considered the comments raised, and responds to them as follows.

Two of the six commenters concur with the policy to include eligible Federal facility sites on the NPL and have no suggested revisions or additional comments.

One commenter "generally supports" the policy, but believes that the criteria used to list Federal facility sites are unclear. The commenter states that "as written, the proposed policy could be interpreted to mean that Federal hazardous facilities would be placed on the NPL regardless of their status under [RCRA] or their degree of actual hazard."

In response, the commenter is correct in concluding that under the policy, Federal facility sites would be placed on the NPL regardless of the facility's status under RCRA. As discussed above, this is consistent with Congressional intent that Federal facility sites should be on the NPL, and that listing criteria should not be applied to Federal sites in a manner that is more exclusionary than for private sites. However, the commenter is incorrect in suggesting that Federal facility sites will be listed regardless of the degree of hazard they present. The Agency intends to use the HRS, the same method used for non-Federal sites, to determine whether a Federal facility site poses an actual or potential threat to health or the environment and, therefore, qualifies for the NPL. (Currently, a site is generally eligible for the NPL if the HRS score is 28.50 or greater.) The

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application of the HRS to Federal facility sites is consistent with CERCLA section 120(d), which requires EPA to use the HRS in evaluating for the NPL the facilities on the Federal Agency Hazardous Waste Compliance Docket.

One commenter did not comment on the policy, but rather is concerned that no Superfund monies be spent at Federal facilities. The commenter believes that neither pre-remedial work (preliminary assessments and site inspections) nor remedial work should be financed by the Trust Fund.

In response, Executive Order 12580 (52 FR 2923, January 29, 1987), at section 2(e), delegates the responsibility for conducting most pre-remedial work to the Federal agencies. Therefore, the Federal agencies, rather than the Trust Fund, finance these activities, with EPA providing oversight. In addition, section 111(e)(3) of CERCLA, as amended by SARA, strictly limits the use of the Fund for remedial actions at Federally-owned facilities. Although the Administrator does have the discretion to use funds from the Hazardous Substances Superfund to pay for emergency removal actions for releases or threatened releases from Federal facilities, the concerned Executive Agency or department must reimburse the Fund for such costs. Executive Order 12580, section 9(i). The Department of Defense and the Department of Energy also have response authority for emergency removals (Executive Order, Section 2(d)).

Another commenter opposes the policy of placing RCRA-regulated Federal facilities on the NPL, arguing that public notification is

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adequately addressed by other provisions of CERCLA (sections 120(b), (c), and (d)), and that the policy is inconsistent with section 120(a), which requires that Federal facilities comply with CERCLA in the same manner as any nongovernmental entity. The commenter believes that the adoption of the proposed policy is inconsistent with EPA's policy regarding non-Federal facilities.

In response, CERCLA sections 120(b), (c), and (d) refer to the establishment of the Federal Agency Hazardous Waste Compliance Docket and to the evaluation of facilities on the docket for the NPL.[14] The Agency agrees that this docket will provide the public with some information regarding hazardous waste activities at Federal facilities, as well as information concerning contamination of contiguous or adjacent property. The Agency believes, however, that evaluating sites using the HRS, and placing on the NPL those sites that pose the most serious problems, will serve to inform the public of the relative hazard of these sites. The listing process also affords the public the opportunity to examine HRS documents and references for a particular site, and to comment on a proposed listing. In addition, the NPL provides response categories and cleanup status codes for sites, and deletes sites when no further

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[14]Pursuant to section 120(c) of CERCLA, EPA published the Federal Agency Hazardous Waste Compliance Docket on February 12, 1988 (53 FR 4280). The docket was established based on information submitted by Federal agencies to EPA under sections 3005, 3010, and 3016 of RCRA and under Section 103 of CERCLA. The docket serves to identify Federal facilities that must be evaluated in accordance with CERCLA section 120(d) to determine if they pose a risk to public health and the environment. Section 120(d) requires EPA to evaluate facilities on the docket using the HRS for possible inclusion on the NPL.

response is required, adding to the informational benefits of using the NPL. Therefore, EPA believes that listing Federal facility sites will advise the public of the status of Federal government cleanup efforts, as well as help Federal agencies set priorities and focus cleanup efforts on those sites that present the most serious problems, consistent with the NCP (50 FR 47931, November 20, 1985).

As to the comment concerning CERCLA section 120(a), EPA agrees that the section provides that Federally-owned facilities are subject to and must comply with CERCLA to the same extent as any nongovernmental entity. Further, sections 120(a)(2) and 120(d) provide that EPA should use the same rules and criteria to evaluate Federal sites for the NPL as are applied to private sites. However, today's policy is not inconsistent with those sections. As a threshold matter, it is uncontroverted that an HRS score of 28.50 or greater is an eligibility requirement for both Federal and private sites. The question is, should NPL-eligible Federal sites be deferred from listing as a matter of policy. As explained above, the Agency does not believe that CERCLA section 120(a)(2) can be read to require identical treatment of Federal and private sites in all circumstances; the fact that Congress legislated a number of requirements in addition to, or instead of, those applicable to private facilities (e.g., sections 120(c), (e)(2), (h)), demonstrates the legislators' recognition of the need to address certain unique aspects of Federal facilities differently than for private sites. Rather, EPA interprets CERCLA section

120(a) to mean that the criteria to list Federal facility sites should not be more exclusionary than the criteria to list non-Federal sites. In this case, it is clear that if EPA were to apply the non-Federal RCRA deferred listing policy to Federal facilities, very few Federal sites would be considered for the NPL, counter to the spirit and intent of section 120(c) and (d) of CERCLA and the statute's legislative history. Moreover, one of the key factors in EPA's decision to adopt a RCRA deferral policy for private sites -- the need to manage and conserve Fund resources -- does not apply to Federal facilities because the remedies are not Fund-financed. EPA believes that it is appropriate, and consistent with Congressional intent, to take these differences into account, as long as the result is not to treat Federal agencies in a more exclusionary manner than private facilities.

Two commenters expressed concern that listing Federal facility sites might interfere with enforcement activities under RCRA. One commenter stated that the policy is inconsistent with CERCLA section 120(i), which requires that Federal facilities comply with all RCRA requirements.

In response, the Agency's view is that today's policy will facilitate enforcement activities at Federal facility sites, not interfere with them. In effect, by encouraging the drafting of comprehensive IAGs for Federal facilities, this policy will advance the goal of site remediation. In addition, the IAG process allows EPA to take steps to avoid duplication and conflict; the IAG may define areas of a Federal facility that may efficiently be

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addressed under RCRA (e.g., units that are distinct from, and do not disrupt, CERCLA activities). In addition, States will be encouraged to become signatory parties to IAGs, reducing the likelihood of intergovernmental conflict over jurisdiction and the selection of remedy.

In any event, it is not the act of placing a site on the NPL that creates a potential conflict between CERCLA and RCRA; rather, the corrective action authorities of the two statutes overlap, pursuant to statutory design. Indeed, the alleged interference with RCRA corrective actions by CERCLA cleanups can occur at any point in the process, depending upon the specific facts of the case. In those cases where the relevant statutes do overlap, EPA believes that one of the statutes must sometimes be chosen for practical reasons, and Congress has set out a procedure for resolving such conflicts in CERCLA section 122(e)(6).[15] However, the goal of today's policy is to minimize any such conflicts through the IAG process.

The Agency acknowledges that in the case of Federal facilities, listing does have a significance not present for private sites. For instance, CERCLA section 120(e)(2) provides that for Federal facility sites on the NPL, EPA will play a role in selecting remedies, while CERCLA section 120(a)(4) provides that State laws

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[15] It is important to note that the section 122(e)(6) authorization requirement at Federal facilities is not triggered automatically by NPL listing, but rather takes effect where an RI/FS has been initiated at a listed Federal site; as a matter of policy, this start-up point for the RI/FS will not be recognized in most cases until an enforceable IAG has been signed, which may be well after a site is listed.

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concerning removal and remedial actions shall apply to Federal facilities when such facilities are not on the NPL (the section does not discuss how State laws apply at Federal sites that are on the NPL). However, any difference in EPA or State roles at NPL versus non-NPL Federal facility sites results from the statutory scheme reflected in CERCLA sections 120(a)(4) and 121(d), and not from the act of listing itself. CERCLA directs EPA to list Federal sites on the NPL and then specifies certain statutory consequences.

Further, merely alleging that there may be some effect on State enforcement actions as a result of a policy of including Federal facilities on the NPL is not grounds for rejecting today's policy. The Agency has reviewed both sides of the question, and has determined that it is in the best interest of the public and environmental protection to place Federal facility sites on the NPL and thus to make CERCLA authorities available to achieve comprehensive remedies for contamination at such sites (when appropriate). In addition, the IAG process, as discussed in this policy, will serve to minimize duplication and inconsistency with potential State orders.

EPA also disagrees with the commenter's suggestion that today's policy is inconsistent with CERCLA section 120(i), which provides that "nothing in this section [120] shall affect or impair the obligation of any department, agency, or instrumentality of the United States to comply with any requirement of the Solid Waste Disposal Act [RCRA] (including corrective action requirements)."

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EPA interprets that section simply to mean that section 120 does not impair otherwise applicable RCRA requirements; this mandate is met even if an action is conducted under CERCLA, as CERCLA section 121(d)(2) specifically provides that ARARs of RCRA and State law must be achieved with regard to any on-site remedy. Even if a RCRA or State requirement that is an ARAR is waived by EPA (section 121(d)(4)), the State may obtain judicial review of such a waiver, and even if unsuccessful, may require that the remedial action conform to the requirement in question by paying the additional costs of meeting such standard (CERCLA section 121(f)(3)); thus, the intent of section 120(i) is satisfied.

This interpretation of section 120(i) follows directly from the language of the provision itself, which states that "nothing in this section" -- as compared to "nothing in this Act" -- shall affect RCRA obligations. This leaves in place limitations contained in <u>other</u> sections of the statute, such as the permit waiver provision (section 121(e)); the process for selecting and waiving ARARs (sections 121(d)(2) and (d)(4)); and the ban on remedial actions not approved by the President (section 122(e)(6)).

For all these reasons, the Agency believes that today's Federal facilities listing policy is appropriate, that it reflects Congressional intent, and that it is consistent with CERCLA.

Pursuant to the policy described in this notice, the Agency will place eligible Federal facility sites on the NPL even if the site is also subject to the corrective action authorities of Subtitle C of RCRA.

Jonathan Z. Cannon
Acting Assistant Administrator-
Office of Solid Waste and
Emergency Response

3/6/89
Date

Doc. No.: CLET-00536-12.02-03/07/8

1143

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

MAR 7 1986

4PM-EA/JLH

Commanding Officer
Department of the Navy
Southern Division
Naval Facilities Engineering Command
P.O. Box 10068
Charleston, South Carolina 29411

Attention: Mr. D.R. Spell, Head
Environmental Branch

Dear Sir:

In the recent past during informal contact with your staff, we have suggested that your agency (including the facilities you represent) and the Environmental Protection Agency (EPA), Region IV might benefit from more direct contact and closer coordination in carrying out your Naval Assessment and Control of Installation Pollutants (NACIP) Program. To date, we have participated by providing written comments on Phase I and in some cases, Phase II of the program at various facilities.

The need for careful coordination including the timely exchange of information on the regulation of inactive hazardous waste sites has been re-enforced by enactment of amendments to the Resource Conservation and Recovery Act (RCRA), (Note: these amendments have been titled the Hazardous and Solid Waste Amendments of 1984 (HSWA). We believe that provisions of the Act (Section 3004(U) will impact ongoing programs by expanding or modifying objectives or requirements deriving from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the National Contingency Plan. Specific areas in which this impact will be felt most heavily are groundwater monitoring at individual sites and development and implementation of appropriate remedial action plans that will require RCRA approval through a system of permitting. While the details on the extent to which Section 3004(U) are applicable at Federal Facilities have not been provided, we have been assured that they will be provided soon. Because of our belief that a better developed protocol will offer benefits to all we would like to propose a meeting with you and appropriate members of your staff to discuss this in depth.

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03/07/86

We would suggest a meeting at your offices in Charleston on or about March 27, 1986, if this is acceptable to you. If practicable, representatives of the Norfolk Office might find it desirable to participate.

Sincerely yours,

Arthur G. Linton, P.E.
Regional Federal Facilities Coordinator
Environmental Assessment Branch
Office of Policy and Management

cc: J. Bailey
Atlantic Division
Norfolk, VA

Doc. No.: CLEJ-
00551-12.02-
08/07/86

07 AUG 1986

MEMORANDUM FOR FILES

Subj: NACIP PROGRAM MEETING AT MCB CAMP LEJEUNE OF 31 JUL - 1 AUG 86

Encl: (1) Agenda
(2) List of Attendees
(3) Draft Conference Committee Languages, CERCLA Reauthorization

1. I attended a meeting at Camp Lejeune that was requested by EPA so they could comment on the material we sent them last spring. The meeting agenda is provided as enclosure (1); enclosure (2) is a list of attendees.

2. First, EPA had no technical comments on ESE's first round report, the accompanying data, or our round two SOW. We explained that the ESE report was an interim progress report, not the final product of our study. Their general comments are as follows:

a. Our end result should meet the requirements of the NCP. Guidance along these lines should be filtering down from DOD.

b. We should accelerate our study for highly-contaminated sites.

c. Camp Lejeune will definitely make the NPL. It takes about a year after the scoring process has begun.

d. They recommend the modified Appendix VIII (or priority pollutants?) scan be done at each site before deleting it from the program. This should also satisfy the RCRA 3004u requirements for SWMUs. Mathis suggested we sample the most downgradient well as a worst-case.

e. We may want to consider stainless steel (SS) wells if low levels of contaminants are detected (for example, use SS for one well at a site). We can check on the RCRA protocol with John Dickenson (NC RCRA). If we elect not to use SS wells, we should discuss in the report that we considered the need and made our decision based on engineering judgement.

f. We should ask ESE to evaluate the SOW from the RI/FS perspective. (Per Bob Gregory, our CS end result will be pretty much the same as an RI/FS).

3. We discussed briefly the USGS groundwater study. Bob Alexander summarized the scope and mentioned that the data would be useful to ESE. EPA stated that they didn't want USGS to look at contamination problems because, historically, they haven't been very cognizant of EPA regulations or very cooperative with the agency.

4. Bob Gregory reviewed the SOW for round two sampling and characterization/feasibility in the Hadnot Point area.

5. Junior Johnson discussed CLEJ's water distribution system. Their wells tap into the Castle Hayne aquifer at depths ranging from 150 to 250 feet.

Subj: NACIP PROGRAM MEETING AT MCB CAMP LEJEUNE OF 31 JUL - 1 AUG 86

(The country wells tap another aquifer approximately 500' deep). Average yield is 250 gpm, however, TT wells yield only 90 gpm. The Tarawa Terrace system is now being supplemented by the Holcomb Boulevard system through an 8" raw water main. CLEJ may abandon all the TT wells due to the low yields.

6. Rick Shriver reviewed the state's progress on the Tarawa Terrace investigation. They determined that ABC Cleaners had been discharging chlorinated solvents through their septic tank system since the early 1950's. The state has issued a NOV to the owner and put the site on their CERCLA inventory. Their legal people have the next move, however, the state will probably ask the owner to conduct a study to determine the extent of the contamination and perhaps, to remove the septic tank and sludges. (This would entail destruction of the building, since the septic tank drainfield is underneath it). EPA said the state was proceeding properly and they would check with their CERCLA people on the site status. They recommended the government (i.e., CLEJ) look at filing suit for restitution for the contaminated wells, however, base personnel were reluctant to take any action. It seems they are in the midst of acquiring additional acreage and are adamant about not generating any more adverse publicity.

7. EPA was most anxious to talk about SWMUs. They're planning to go back to their legal staff to find out how to open CLEJ's permit to apply 3004u. They stated that should we wait for permit reissuance in the 1990's, the RCRA people may dismiss our NACIP data as being too old. EPA distributed a draft of conference committee language on CERCLA reauthorization (Encl (3)). It seem these sections have already been agreed on by the conferees. In the draft document, the 3004u provision is applied to all facilities, even those not seeking Part B permits. EPA will expect the same IRP process to be followed for all SWMUs and urged CLEJ to request their permit be reopened to include these. I pointed out that we have yet to receive any guidance from DOD on how the 3004u process will be funded and implemented, so it would be premature for CLEJ to request permitting for these units. I also asked if we will have to work with both EPA's RCRA and CERCLA people for the duration of the NACIP program. It seems EPA headquarters has not yet determined which branch will have the lead.

8. On August 1, we toured the NACIP sites by car. After an out-briefing, we adjourned at 2:00 pm.

Cherryl Barnett
Environmental Engineer

Doc NO: CLEJ - 0055
12.02 - 08/07/8

AGENDA

REVIEW OF N.A.C.I.P. PROGRAM

MARINE CORPS BASE

CAMP LEJEUNE

31 JULY 1986

Thursday, 31 July

0830-0840	Welcome & Introductions	COL Dalzell, Asst. Chief of Staff, Facilities
0840-1030	U.S.E.P.A. Comments	Region IV Staff
1030-1200	Confirmation Study Update	LANTDIV and Envir. Science & Engr.
1200-1300	Lunch, No host	
1300-1400	Tarawa Terrace Update	N.C. Div. of Env. Mgt.
1400-1500	Review of Drinking Water Systems	Base Utilities Branch
1500-1600	Review of RCRA Regulations	EPA/State Staff

Friday, 1 August

0800-1200	Tour of N.A.C.I.P. Sites	
1200-1330	Lunch, No host	
1330-1400	Outbrief, Bldg 1	

N.C.I.P. Review

Doc NO: CLEJ-00551-12.02-08/07/86

Camp Lejeune, NC

Name	Representing	Phone
ROBERT GREGORY	ESE -- GAINESVILLE, FL	904-332-3318
G.S. JOHNSON, JR.	UTILITIES / BASE MAINT.	919-451-5161
W R PRICE	UTILITIES / BASE MAINT.	919-451-5488
Lou Mancuso	EPA Region IV (WCS)	404-347 3016
Andrew Puffer	EPA Region IV - Superfund	404-347-2643
Thomas H Barbee	NREAD, CAMPLEJEUNE, NC	919-451-5977
JAMES L. HOLLOWAY	EPA REGION IV FEDERAL FACILITIES	(404) 347-3776
WAYNE R. MATHIS	EPA REG IV, ERRB	(404) 347-2643
ARTHUR G. LINTON	EPA REG. IV REGIONAL FED. FAC. COORD.	404-347 3776 FTS 257 3776
RICK SHIVER	N.C. DIVISION OF ENVIRONMENTAL MANAGEMENT (DEM) - GROUNDWATER SECTION	(919) 256-1161
JULIAN WOOTEN	NAT RES & ENV AFFAIRS DIV MCB CL N.C.	FTS-676-5003 919-451-5003
ELIZABETH A. BETZ	NAT RES - ENV AFFAIRS DIV. MCB, CL, NC	FTS 676-5977 919-451-5977
Lee Laymon	N.C. Div. Environm. Mgt. Groundwater Section	919-733-5083
DOUGLASS DIXON	NC DEPT. OF NATL. RESOURCES & COMM. DEV. DIVISION OF ENVIRONMENTAL MGT. GROUNDWATER SECTION	919-733-5083
Colonel Tom Dalzell USMC	Asst Chief of Staff, Facilities Marine Corps Base Camp Lejeune	(919) 451-3039/35 (AV) 484
CHERYL BARNETT	ATLANTIC DIVISION, NAVAL FACILITIES ENGINEERING COMMAND	(804) 445-1814

Doc. No.: CLEJ-00534-12.02-08/21/86

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

AUG 21 1986

4PM-EA/JLH

Colonel Tom Dalzell
Assistant Chief of Staff, Facilities
United States Marine Corps
Marine Corps Base
Camp Lejeune, North Carolina 38542

ATTN: Bob Alexander
Base Environmental Engineer

Dear Colonel Dalzell:

The Regional Office Staff and I wish to thank you for the hospitality extended to us during our visit of July 31 and August 1, 1986. We were able to provide you with updated information on the status of some of the environmental programs administrated by EPA particularly those related to the 1984 Hazardous and Solid Waste Amendments (HSWA) to the Resource Conservation and Recovery Act (RCRA). The ensuing discussions pinpointed 3004(u) of those amendments and the applicability of the provisions to your facility. During the discussions your staff requested copies of some of the information being addressed. We are happy to provide it (see enclosures). In addition, I am enclosing staff comments on the scope of work (SOW) for round two sampling of your NACIP confirmation study. The impact of some of the provisions we discussed need review and clarification. We will respond to these as soon as possible.

Sincerely yours,

Arthur G. Linton, P.E.
Regional Federal Facilities Coordinator
Environmental Assessment Branch
Office of Policy and Management

Enclosures

cc: Naval Facilities Engineering Command
Norfolk, VA
Attention: Cherryl Barnett

DOC NO. CLEJ-0053-12.02-
08/21/86

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: AUG 1 1 1986

SUBJECT: NACIP Confirmation Study, Scope of Work for Round Two Sampling and Characterization/Feasibility, Marine Corps Base, Camp Le Jeune North Carolina

FROM: Geologist, Remedial Review Team, ERRB

TO: Arthur G. Linton, Federal Facilities Coordinator

We have completed our review of the Scope of Work (SOW), and the activities scheduled for this effort appear to address all areas of concern. Specific comments are provided below.

1) We understand that PVC materials are being used in the construction of all monitor wells. A brief discussion of the rationale for using PVC (versus other materials) should be included in the report summarizing this round of sampling.

2) Please refer to item 1 (v) in the SOW. While composite sampling of water supply wells is cost effective, it provides little specific information about the groundwater contamination problem. We recommend that all wells in the area around the contaminanted Hadnot Point wells be sampled individually. This will make it possible to pinpoint wells that are contributing contaminants to the water supply system, and such information could assist in tracking the movement of contaminants through the shallow aquifer.

3) It is not clear if there will be two two-week soil gas investigation efforts carried out or if one soil gas investigation is intended to have a dual-fold purpose.

We appreciate being given the opportunity to provide input to this Camp Le Jeune Scope of Work.

Andrew J. Puffer

Andrew J. Puffer

ENVIRONMENTAL PROTECTION AGENCY
AUG 18 1986
EPA-REGION IV
ATLANTA, GA

(2)

DOC NO: CLEJ-00534-12.02-08/21/86

federal register

Wednesday
March 5, 1986

Part VI

Environmental Protection Agency

40 CFR Parts 260, 261, 262, 264, 265, 266, 270, 271, and 280

Federal Hazardous Waste Facilities; Policy and Interpretation, and Intent to Propose Rules

DOC NO: CLEJ-00534-12.02-
08/21/86

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260, 261, 262, 264, 265, 266, 270, 271, and 280

[FRL-2978-3]

Hazardous Waste Management System; Supplement to Preamble to Final Codification Rule

AGENCY: Environmental Protection Agency.

ACTION: Notice of policy and interpretation.

SUMMARY: In November 1984 Congress comprehensively amended the Resource Conservation and Recovery Act (RCRA) of 1976. The amendments include a new section 3004(u) requiring corrective action for releases of hazardous waste and constituents at hazardous waste management facilities seeking RCRA permits. On July 15, 1985 (50 FR 28702) the Environmental Protection Agency (EPA) published a final rule codifying statutory changes to its hazardous waste management program. In the preamble to this final codification rule, EPA announced that it needed to resolve legal and policy issues concerning the applicability of the new corrective action program to federal hazardous waste facilities. EPA today is supplementing that preamble by explaining the resolution of three issues of statutory interpretation concerning federal agency compliance. In a separate notice also published today EPA is announcing its intent to propose rules addressing three related issues.

FOR FURTHER INFORMATION CONTACT: RCRA Hotline, toll free, at (800) 424-9346 or at (202) 382-3000. Also, Denise Hawkins, Office of Solid Waste (WH-563), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 382-2210.

SUPPLEMENTARY INFORMATION: In November 1984 Congress amended RCRA by enacting the Hazardous and Solid Waste Amendments of 1984. The amendments include a new section 3004(u), 42 U.S.C. 6924(u), requiring any permit issued to a hazardous waste management facility after November 8, 1984 to require corrective action for all releases of hazardous waste or hazardous constituents from any solid waste management unit at the facility regardless of when waste was placed in the unit.

On July 15, 1985 (50 FR 28702) EPA promulgated a final rule codifying statutory changes to its hazardous waste regulations. In the preamble to this rule, EPA presented its view on the meaning of "facility" in section 3004(u). EPA took the position that Congress intended "facility" to include the entire site under control of the owner or operator engaged in hazardous waste management (50 FR 28712). EPA added, however, that it had not resolved various legal and policy questions regarding the extent to which Congress intended this definition to apply to hazardous waste "facilities" owned or operated by federal agencies. EPA gave a commitment to make its best efforts to resolve these issues within 60 days.

Today EPA is supplementing the preamble to the codification rule by giving notice of its views on three issues of statutory interpretation concerning federal compliance with section 3004(u). In a separate notice published elsewhere in today's **Federal Register** EPA is also announcing that it intends to address three additional issues through rulemaking.

As a result of the promised review, EPA has concluded that section 3004(u) subjects federal facilities to corrective action requirements to the same extent as any facility owned or operated by private parties. Furthermore, EPA has determined that the statute requires federal agencies to operate under the same property-wide definition of "facility." These results are consistent with section 6001 of RCRA, 42 U.S.C. 6961, which generally requires each department, agency and instrumentality of the federal government to comply with RCRA requirements to the same extent as any other person.

The federal agencies, however, have raised several issues that merit special consideration. These issues involve the scope of federal ownership interests and the need to set priorities for the use of federal cleanup funds.

EPA is resolving the first of these issues as a matter of statutory interpretation. The federal agencies have pointed out that the United States could be considered the "owner" of a federal hazardous waste facility. Under EPA's interpretation of the definition of "facility" for section 3004(u), contiguous tracts of federal lands owned by the United States but administered by different federal agencies could be considered a single "facility" for corrective action purposes. A permit for a hazardous waste unit located anywhere on this collective federal "facility" would trigger corrective action requirements for every solid waste management unit found within its boundaries. In the western half of the United States, continguous federal lands cover large portions of several states. Moreover, the agency that operates a hazardous waste unit might not have authority to require or manage cleanup of solid waste units on lands administered by other agencies. The size of the facility and the administrative limitations could make corrective action very difficult.

What Constitute a Federal Facility For Purpose of 3004u

EPA believes that Congress did not intend section 3004(u) to require such wide-ranging cleanups on federal lands. Congress has consistently expected individual federal departments and agencies to obtain RCRA permits and manage hazardous waste. For example, section 6001 of RCRA specifically requires "departments, agencies and instrumentalities of the Federal government" to comply with RCRA requirements. The legislative history of this provision also requires "federal agencies" to comply with RCRA. S. Rept. 94-938, 94th Cong., 2d Sess. at 24 (1976). Congress could easily have referred to the "United States" if it intended the entire federal government to respond together. Consequently, EPA is today interpreting the concept of ownership for the purposes of section 3004(u) as referring to individual federal departments, agencies, and instrumentalities.

EPA has concluded that it would be more appropriate to resolve the remaining issues through rulemaking. EPA intends to propose rules in the near future to resolve these issues, which are described in greater detail in a separate notice published in today's **Federal Register**.

Dated: February 28, 1986.

Lee M. Thomas,

Administrator.

[FR Doc. 86-4754 Filed 3-4-86; 8:45 am]

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DOC NO: CLES-00257-12.0C-
08/21/86

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260, 261, 262, 264, 265, 266, 270, 271 and 280

[FRL-2978-4]

Hazardous Waste Management System; Intent To Propose Rules for Federal Facilities

AGENCY: Environmental Protection Agency.

ACTION: Notice of intent to propose rules.

SUMMARY: In November 1984 Congress comprehensively amended the Resource Conservation and Recovery Act (RCRA) of 1976. The amendments include a new section 3004(u) requiring corrective action for releases of hazardous waste and constituents at hazardous waste management facilities seeking RCRA permits. On July 15, 1985 (50 FR 28702) the Environmental Protection Agency (EPA) published a final rule codifying statutory changes to its hazardous waste management program. In the preamble to this final codification rule, EPA announced that it needed to resolve legal and policy issues concerning the applicability of the new corrective action program to federal hazardous waste facilities. Elsewhere in today's Federal Register EPA is supplementing that preamble by stating its views on three issues of statutory interpretation. In this notice EPA announces its intent to propose rules addressing three additional issues related to federal agency compliance.

FOR FURTHER INFORMATION CONTACT: RCRA Hotline, toll free, at (800) 424-9346 or at (202) 382-3000. Also Denise Hawkins, Office of Solid Waste (WH-563), U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460, (202) 382-2210.

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Elsewhere in today's **Federal Register** EPA is publishing a policy notice that supplements the preamble to the codification rule by giving notice of EPA's views on three issues of interpretation concerning federal compliance with section 3004(u). In this notice EPA is announcing that it intends to address three additional issues through rulemaking. This notice is not a proposal and EPA is not yet requesting comments on these issues.

In the policy notice published separately today, EPA is announcing that it interprets the concept of on "ownership" for the purposes of defining facility boundaries under section 3004(u) as refering to individual departments, agencies and instrumentalities. In some cases EPA believes that "ownership" should refer to major departmental subdivisions that exercise independent management authorities. For example, within the Department of Defense, EPA believes that the term should be viewed as referring separately to the separate branches of the Armed Services. Similarly, within the Department of the Interior, EPA believes that "ownership" should refer to major subdivisions such as the National Park Service and the Bureau of Land Management. If ownership is not defined in terms of these smaller units, the logistical problems described in the other notice will continue to hamper federal corrective actions. EPA therefore believes that recognition of these subdivisions is consistent with Congressional intent. EPA will propose a rule to clarify position and explain more fully the rationale for recognizing specific subdivisions. In the interim, EPA intends to recognize principal subdivisions as a matter of statutory interpretation on a case-by-case basis in individual permit proceedings.

The Department of the Interior has expressed concern that federal agencies might be considered "owners" of hazardous waste facilities on federal lands operated by private parties with partial property interests such as leases or mineral extraction rights. The Department urges that the federal government should not be held responsible for releases from such operations. Furthermore, it believes that the federal agency should not have to clean up releases on contiguous federal land when such a private party applies for a RCRA permit for its hazardous waste facility.

EPA intends to propose a rule that limits Federal agency responsibility for facilities operated by private parties with legal ownership interests by identifying a "principal owner" for the purpose of defining the "facility" boundary under section 3004(u). The "principal owner" probably would be the person most directly associated with operation of the hazardous waste facility. Only property within the scope of the "principal owner's" legal interest would be considered the "facility" for corrective action purposes. The federal agency that administers the same land for the United States would not be responsible for complying with section 3004(u) within the principal owner's "facility." To determine whether a private party on federal lands should be treated as a "principal owner", EPA might consider factors such as the degree of control the federal agency exercises over the private party's actions, or the amount of benefit the agency derives from the private party's waste management operation. EPA will also need to consider the impact of this concept on private lands where one private party has granted legal ownership interests to a second private party that operates a hazardous waste "facility."

Finally, all of the federal agencies that discussed these issues with EPA have advocated the establishment of national priorities for cleaning up hazardous releases at federal facilities under section 3004(u). EPA agrees that it is rational as a matter of public policy to address the most seriously contaminated facilities first. Moreover, since the funding for corrective action is not unlimited, priorities would help maximize the use of available funds. EPA also recognizes that states, which will have the authority to issue hazardous waste permits requiring corrective action after EPA authorizes them to exercise this new authority, may not share the same national perspective or have the same priorities.

EPA intends to develop rules that would allow federal agencies, subject to EPA approval after consultation with the states, to set priorities for correcting releases from solid waste management units at facilities that they own or operate. These rules would also assure a state's full participation in establishing

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the priorities as a part of the authorization process. Further, EPA would ensure that any priority setting scheme would not disturb the authorized state's traditional role as the primary issuer of RCRA permits. After a State obtains authorization to implement 3004(u) the State would issue the corrective action portion of a hazardous waste permit in authorized state. EPA is not proposing any specific rules on these issues today, but it intends to propose rules soon.

EPA has resolved three of the basic issues concerning federal compliance with section 3004(u): The applicability of section 3004(u) to Federal agencies; the definition of "facility"; and the concept that the United States is not the "owner" for the purpose of defining RCRA facilities.

EPA will work as quickly as possible to resolve the remaining issues concerning the "principal owner" and national priorities. In the interim, EPA and the states will proceed to review and issue RCRA permits, and EPA will implement 3004(u) requirements at federal facilities. EPA will address issues not yet resolved by rulemaking on a case-by-case basis.

Executive Order 12291 requires each Federal agency to determine if a regulation is a "major" or "minor" rule as defined by the Order and to submit all regulations to OMB for review. Since this notice does not propose or promulgate any rules, EPA has not assessed its impacts or classified it as a "major" or "minor" rule under E.O. 12291. EPA, however, did submit this notice to OMB for review.

Dated: February 28, 1986.

Lee M. Thomas,

Administrator.

[FR Doc. 86-4755 Filed 3-4-86; 8:45 am]

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WES

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 8 1986

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: The Department of Defense Installation Restoration Program

FROM: Marcia E. Williams, Director
Office of Solid Waste

TO: Waste Management Division Directors
Regions I - X

This memorandum discusses RCRA permits at facilities owned or operated by the Department of Defense (DOD). DOD has developed the Installation Restoration Program (IRP) to identify and clean-up hazardous waste sites. Under the IRP, DOD prepares studies and generates data that can assist EPA in drafting RCRA permits.

The IRP is carried out in stages that are comparable to the stages of a cleanup required by RCRA. Phase I of the IRP is intended to identify waste sites and is comparable to a RCRA Facility Assessment. A Phase I report should identify most, if not all, of the solid waste management units at a DOD facility. Phase II of the IRP characterizes the nature and extent of contamination at a site or unit. Phase II usually provides site characterization information and monitoring data and is comparable to a RCRA Facility Investigation. Phase III of the IRP is an R&D phase that is used where a site cannot be controlled with proven technology or where a site is suitable for evaluating new technologies. Although the permitting process has no R&D stage, Phase III of the IRP can be helpful in identifying new or unique corrective measures. Phase IV of the IRP develops and implements a remedial action plan. Phase IV is comparable to identifying and implementing corrective measures under RCRA.

EPA has placed a high priority on RCRA compliance at Federal facilities. The work performed under the IRP will provide you with much of the information you need to prepare a permit, and I urge you to incorporate the IRP process into the permit development process. This means that you need to work with the DOD installation in reviewing the results of each phase of the IRP process and when necessary, expand the scope of the IRP to include all solid waste management units at the facility.

Please keep in mind that we are developing a rule that will recognize priorities for corrective action at Federal facilities. After we promulgate the rule we will incorporate a facility's priority into the schedule of compliance under §3004(u) of RCRA. Until we prepare a final rule, permits should recognize that DOD can not address releases from every solid waste management unit at every facility simultaneously.

In sum, I urge you to use the IRP process when you implement the RCRA corrective action authorities under §3004(u). Thank you for your attention to this matter.

cc: RCRA Branch Chiefs
Regions I - X

JGW [illegible] 12.0d-09/08/87

To: Cherryl Barnett F-9-15

From: Brian Higgins

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FYI. Dave Olsoyer working with EPA and NEESA to see how we will handle this. He and Carl Zilly aren't too concerned if we don't get the info in by Oct 15. Carl's comment was that old HRS wasn't to favorable to us

SEP - 8 1987

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Pre-Remedial Activities at Federal Facilities

FROM: Gene A. Lucero, Director Gene A. Lucero
Office of Waste Programs Enforcement

Henry Longest, Director
Office of Emergency and Remedial Response Walter W. Kovalick for Brian

TO: Addressees

As you are aware, Section 120 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA), specifically addresses Federal facilities. The purpose of this memo is to provide guidance on the implementation of §120(d), "Assessment and Evaluation."

BACKGROUND

SARA Pre-Remedial Requirements

Section 120 of SARA sets out the requirements for pre-remedial activities at Federal facilities. Section 120(a)(2) provides that all EPA guidelines, rules, regulations, and criteria are applicable to Federal facilities. Federal facilities may not adopt or use any guidelines, rules, regulations, or criteria which are inconsistent with those established by EPA. To facilitate Federal facility compliance with this provision, this memo and attachments provide a summary of requirements and EPA guidelines and procedures applicable to the pre-remedial process.

Section 120(c) requires EPA to establish a special Federal Agency Hazardous Waste Compliance Docket (docket) based on information submitted by Federal agencies under the Resource Conservation and Recovery Act (RCRA) §3016, 3005, and 3010, and CERCLA §103. The docket consists of information reported to EPA by October 17, 1986, the date of enactment of SARA; however, the information must be coordinated and compiled from the various data sources into one quality

assured/quality controlled list. We anticipate publication of the docket in the Federal Register in late fall. The docket will be available to the public and will be updated every six months. All facilities in the docket are subject to the deadlines for assessment and evaluation found in §120(d).

Section 120(d) requires EPA, within 18 months of the date of enactment (April 1988), to "take steps to assure that a preliminary assessment (PA) is conducted for each facility on the docket." While EPA has the responsibility to assure a PA is conducted, Executive Order 12580, dated January 23, 1987, delegates the responsibility for the conduct of the assessment to the Federal agencies.

Following the PA, EPA shall, where appropriate, evaluate and list facilities on the National Priorities List (NPL) using the same criteria that are applied to other facilities; i.e., the Hazard Ranking System (HRS). The statute states that, "Evaluation and listing under this subsection shall be completed not later than 30 months after such date of enactment," or April 1989. Section 120(d) also provides that, "Upon the receipt of a petition from the Governor of any State, the Administrator shall make such an evaluation of any facility included in the docket." Beyond this petition provision, SARA mandates at §120(f) State involvement generally in the Federal facilities effort.

In addition to the PA requirement in §120, §105(d) provides that "any person who is, or may be, affected by a release or threatened release of a hazardous substance or pollutant or contaminant, may petition the President to conduct a preliminary assessment of the hazards to public health and the environment which are associated with such release or threatened release." E.O. 12580 delegates responsibility to respond to a PA petition to the Federal agencies. The Federal agency has 12 months after receipt of the petition to complete the assessment or provide an explanation of why the assessment is not appropriate.

Finally, §105(c) requires EPA to propose amendments to the HRS within 18 months of the date of enactment. The effective date for the amendments is not later than 24 months after the date of enactment. The manner in which the HRS revisions and schedules affects our ability to address the §120 deadlines for assessment and evaluation is discussed below.

Ability to Meet SARA

Section 120(d) establishes a 30 month deadline for EPA evaluation and listing of Federal facilities. Section 105(c) requires that EPA amend the HRS by April 1988. SARA also states that the current HRS is not effective after October 17, 1988.

The timing of the HRS revisions significantly impacts our ability to meet the §120(d) deadline for listing facilities on the NPL. The current HRS cannot be used after October 17, 1988, and all sites proposed under the current HRS must go final under the current HRS. Therefore, sites proposed under the current HRS must be listed in final on the NPL by October 17, 1988. Usually, this would require an October proposal to allow time for the normal rulemaking process (approximately one year). While this timeframe is the case for non-Federal facilities, EPA's short-term strategy is to publish a separate proposed rule for Federal facility sites in the second quarter of FY88 (See "Pre-Remedial Schedule" in Attachment A). This short-term strategy is an effort to maximize compliance with deadlines for evaluation and listing and accommodate the schedule for revisions to the HRS.

It is important to note that facilities not included in this Federal facility second quarter proposed rule are subject to evaluation under the new HRS which is anticipated to require additional data. Any proposal under the new HRS cannot occur until after the effective date of the new HRS (October 1988). Therefore, rulemaking under the new HRS would be beyond the 30 month deadline set forth in the statute. The process for facilities to be evaluated under the new HRS is addressed in the long-term strategy.

STRATEGY

Short-Term Strategy: Listing Under the Current HRS

The goal of the short-term strategy is to evaluate and, where appropriate, list facilities under the current-HRS for the FF proposal in the second quarter of FY 88. This effort to evaluate and list facilities will involve evaluating pre-remedial information previously submitted by Federal agencies as well as new reports not yet submitted. All reports must be received by October 15, 1987 and should be sent by the Federal agencies to the EPA Regional Federal facility contacts found in Attachment B.

Federal agencies can help EPA streamline the process so that the maximum number of sites can be scored, proposed, and promulgated under the current HRS by 1) providing one point of contact for each facility, 2) submitting complete reports, and 3) setting priorities.

Federal agencies should be sure that the EPA Regional office knows the name and telephone number of the appropriate contact person for each facility in the docket. While this is a simple concept, it is extremely important to have a designated contact person in the event that additional information or verification of information is necessary. Federal agencies should provide the EPA CERCLA Federal facility contact (See Attachment B) with this information as soon as possible.

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It is critical that the reports submitted by Federal agencies are complete and consistent with the data requirements of the HRS. Our experience with reports previously submitted is that they vary in scope and quality and are often insufficient to perform an HRS evaluation. Clearly, the completeness of existing reports and those to be submitted by October 15, 1987 will determine to a large degree the number of Federal facilities that can be proposed in the special Federal facility proposed rule.

State agencies may have done, but not submitted to EPA, PAs and HRS scoring packages for Federal facilities. States can assist EPA by submitting any such packages to the EPA CERCLA Federal facility contact by October 15, 1987.

The reports to be submitted must contain the information necessary for EPA to score sites using the HRS. While EPA will determine the actual HRS score, it is recommended that Federal agencies develop draft HRS scores, or index the reports in a manner to facilitate HRS scoring, to ensure that all of the necessary information has been collected and documented. It is important to recognize that the sole purpose of the draft HRS score is an indicator for Federal agencies of adequate information collection; EPA maintains full authority and responsiblity for determining the actual HRS score. Attachments C ("Guidance on Preliminary Assessments and Site Inspections Uncer CERCLA"), D ("Documentation Requirements in Support of the HRS"), and E ("Uncontrolled Hazardous Waste Site Ranking System - A Users Manual"), describe the requirements and formats Federal agencies should use for developing and submitting information for HRS evaluation.

EPA must evaluate a very large number of Federal facility pre-remedial reports in a short amount of time. At this time we would like your input as we set priorities for evaluating the reports/facilities. Please send your list of priorities for evaluation to Christopher Grundler, Director, Federal Facilities Compliance Task Force, WH-527, 401 M Street, S.W., Washington, D.C. 20460 as soon as possible. Suggested factors to consider include completeness of the report, facilities with ongoing remedial investigation/feasibility studies or targetted for remedial actions, level of community concern, level of State interest, etc.

An approach which has been under discussion to further streamline the process is whether to do an HRS/NPL evaluation on one appropriate area of a facility and list the entire facility if the area scores high enough; or to do HRS/NPL evaluations on each appropriate area and thus have multiple NPL sites listed for one facility. While site-specific circumstances and discussions with the State may dictate which approach to take, as a general matter we have decided to use the NPL to list the entire facility where there is

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at least one NPL-eligible site at the facility. Following the NPL listing, and separate from the NPL process, EPA and the State will then work with the facility to design a comprehensive strategy which would address both RCRA and CERCLA requirements at the facility. As stated in the proposed EPA Federal facility listing policy (52 FR 17991, May 13, 1987), NPL listing in no way preempts applicable RCRA requirements.

Process

We intend to use the Technical Enforcement Support (TES) contract for the evaluation and scoring of Federal facility reports currently in the pipeline and those received by October 15, 1987. The work will be initiated in the Regions. We will forward a memo explaining how to access and initiate tasks under the TES contract. TES has been trained by the pre-remedial program contractors familiar with the HRS and the evaluation of Federal facilities.

Where the information in the reports is minimally inadequate for scoring purposes, the EPA contractor will attempt to supplement the information by telephone with the designated facility contact. However, if there are major gaps in available data, we will have to use the time consuming process of identifying the inadequacies and the Federal agency will have to supplement the information.

Once the EPA contractor has completed the HRS scoring, those sites that score above 25 will be sent to the Regional NPL Coordinators for a quality control review, followed by quality assurance in the Hazardous Site Evaluation Division in Headquarters, and finally proposal for the NPL if the score is above 28.5.

Long-term Strategy and Process: Future Listing Under the New HRS

Consistent with §120(a)(2), EPA strongly recommends that all Federal agencies adopt EPA terminology; e.g., Preliminary Assessment (PA), Site Inspection (SI), etc. The Department of Defense and Department of Energy have already committed to using EPA terminology.

The long-term strategy applies to those facilities in the docket not evaluated for/listed on the special Federal facility proposal. The new HRS will be used for evaluation of these facilities. Federal agencies are responsible for collecting, within 18 months of the date of enactment, the information necessary for EPA to determine which facilities should be listed on the NPL. Determinations for inclusion on the NPL are based primarily on a score developed as a result of application of the HRS. The information required by the National Contingency Plan (NCP) for applying the HRS is equivalent to an EPA PA and SI.

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Federal agencies should conduct a PA on these facilities consistent with SARA and the NCP. Federal agencies should notify the State of PAs to be initiated in the State pursuant to §121(f). If the Federal agency determines that no further action is required, the PA report should be submitted to the EPA CERCLA Federal Facilities Contact (see Attachment B) and to the State. EPA will review the report and concur or nonconcur with the Federal agency determination that no further action is required pursuant to the authority in §120(d) that EPA assure that a PA is conducted. The State will have the opportunity to review and comment on the PA pursuant to Section 121(f). If EPA agrees with the no further action determination, this information will be entered into the docket. If EPA does not agree, EPA will notify the Federal agency that more information is needed for the required evaluation.

If, based on the PA, the Federal agency determines an SI is necessary, the Federal agency should perform an SI on the facility consistent with SARA and the NCP by April 1988 and submit the PA/SI report to the EPA CERCLA FF Contact and to the State. Federal agencies should notify the State of SIs to be initiated in the State.

The PA/SI report must contain the information necessary for EPA to score sites using the HRS. Again, EPA recommends that Federal agencies develop draft HRS scores to ensure that all of the necessary information has been collected and documented. Guidance on use of the new HRS will be developed and training for Federal agencies will be provided.

The standard quality control/quality assurance process in the Region and Headquarters will be followed.

Conclusion

SARA sets out very stringent deadlines for both EPA and other Federal agencies. In order to address these deadlines, good communication and a clear understanding of the requirements is essential. EPA is committed to assisting the other Federal agencies in meeting their obligations under SARA. Please direct any questions you have to Christopher Grundler, Director, Federal Facilities Compliance Task Force at 475-8800 or Linda Southerland of the Task Force staff at 382-2035.

Attachments

Addressees: Federal Agency Environmental Contacts
State Environmental Agencies
Waste Management Division Directors, Regions I-X

cc: Regional Counsel, Regions I-X
Federal Facilities Task Force
Federal Facilities Coordinators, Regions I-X
Marcia Williams, OSW
Lee Herwig, OFA
Mark Greenwood, OGC

DOC. NO.: OSW - 00044 - 12.2 - 06/01/88

United States
Environmental Protection
Agency

Office of Solid Waste
and Emergency Response
Washington, D.C. 20460

EPA

Office of Waste Programs Enforcement

Summer 1988

Environmental Fact Sheet

The Superfund Enforcement Process: How It Works

INTRODUCTION

In 1980, Congress passed the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), commonly called Superfund. This law provides the U.S. Environmental Protection Agency (EPA) with the authority and necessary tools to respond directly or to compel potentially responsible parties (PRPs) to respond to releases or threatened releases of hazardous substances, pollutants or contaminants. CERCLA created two parallel and complementary programs aimed at achieving this goal.

The first program involves the creation of a trust fund financed through a special tax on the chemical and petroleum industries. This trust fund, known as the Superfund, may be available for site remediation when no viable PRPs are found or when PRPs fail to take necessary response actions. PRPs are defined as parties identified as having owned or operated hazardous substance sites, or who have transported or arranged for disposal or treatment of hazardous substances, pollutants or contaminants at such sites. The second program provides EPA with the authority to negotiate settlements, to issue orders to PRPs directing them to take necessary response actions, or to sue PRPs to repay the costs of such actions when the Trust Fund has been used for these purposes. The actions EPA takes to reach settlement or to compel responsible parties to pay for or undertake the remediation of sites are referred to as the Superfund enforcement process. CERCLA was reauthorized and amended on October 17, 1986, by the Superfund Amendments and Reauthorization Act (SARA). SARA provides EPA with new authorities and tools that strengthen the enforcement program.

LIST OF ACRONYMS

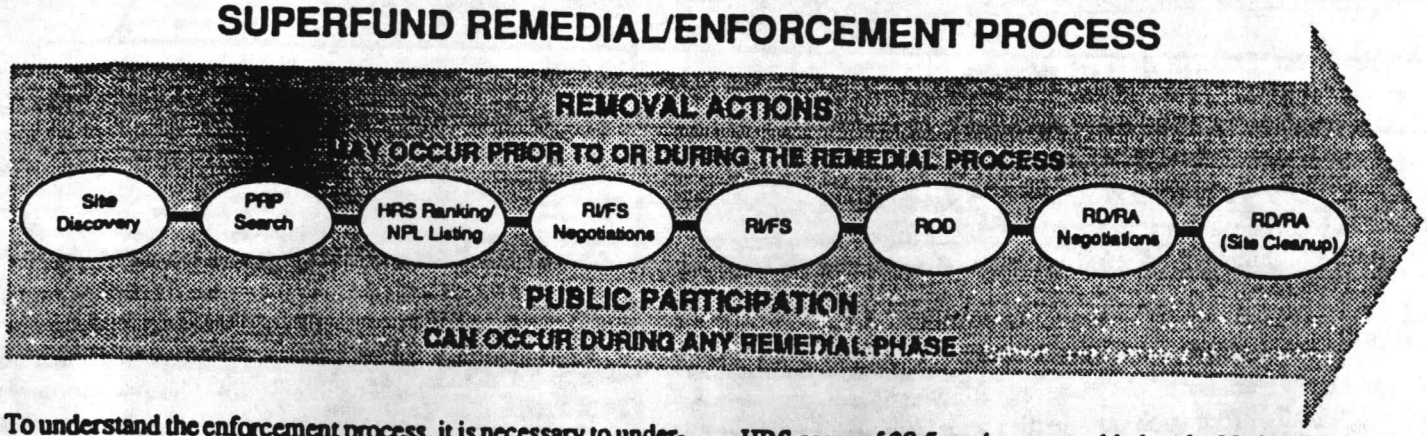
CERCLA:	Comprehensive Environmental Response, Compensation and Liability Act of 1980
IAG:	Interagency Agreement
NBAR:	Non-binding Allocation of Responsibility
NPL:	National Priorities List
PRP:	Potentially Responsible Party
RCRA:	Resource Conservation and Recovery Act, as Amended
RD/RA:	Remedial Design/Remedial Action
RI/FS:	Remedial Investigation/Feasibility Study
ROD:	Record of Decision
SARA:	Superfund Amendments and Reauthorization Act of 1986

This fact sheet describes the enforcement authorities and the process that is followed under the Superfund program. It describes the options available to EPA for remediating hazardous waste sites; the tools and mechanisms that EPA may use in negotiating settlements with PRPs, and describes the decision-making process at enforcement sites.

OVERVIEW OF THE ENFORCEMENT PROGRAM

A major goal of the Superfund program is to encourage PRPs to remediate hazardous waste sites. The enforcement process normally used by EPA to enlist PRP involvement may include five major efforts.

SUPERFUND REMEDIAL/ENFORCEMENT PROCESS



To understand the enforcement process, it is necessary to understand the Superfund remedial process. Under the remedial program, EPA takes long-term actions to stop or substantially reduce releases or threats of releases of hazardous substances that are serious but not immediately life-threatening. Removal actions, which are short-term, immediate actions intended to stabilize a hazardous incident or remove contaminants from a site that pose a threat to human health or welfare or the environment, may be taken at any point in the remedial process.

The Superfund process begins with a preliminary assessment/ site inspection (PA/SI). This usually is conducted by the State, to determine whether the site poses a significant enough potential hazard to warrant further study and investigation.

The site is then ranked using the Hazard Ranking System (HRS), a numerical ranking system used to identify the site's potential hazard to the environment and public health. Sites assigned an HRS score of 28.5 or above are added to the National Priorities List (NPL).

Next, a remedial investigation (RI) is conducted to assess the extent and nature of the contamination and the potential risks. A feasibility study (FS) is then prepared to examine and evaluate various remedial alternatives.

Following a public comment period on EPA's preferred alternative and the draft FS report, EPA chooses a specific remedial plan and outlines its selection in the Record of Decision (ROD).

Once the remedial design (RD) (which includes engineering plans and specifications) is completed, the actual site work, or remedial action (RA) can begin. After RD/RA activities have been completed, the site is monitored to ensure the effectiveness of the response. Certain measures require ongoing operation or periodic maintenance.

First, EPA attempts to identify PRPs as early in the Superfund process as possible. Once identified, EPA will notify these parties of their potential liability for response work when the site is scheduled for some action. Second, in the course of identifying response work to be done, EPA will encourage PRPs to do the work at a site.

Third, if EPA believes the PRP is willing and capable of doing the work, EPA will attempt to negotiate an enforcement agreement with the PRP(s). The enforcement agreement may be an agreement entered in court (such as a judicial consent decree) or it may be an administrative order (where EPA and the PRP(s) sign an agreement outside of court). Both of these agreements are enforceable in a court of law. Under both agreements EPA oversees the PRP.

Fourth, if a settlement is not reached, EPA can use its authority to issue a unilateral administrative order or directly file suit against the PRP(s). Under either course of action, PRPs are directed to perform removal or remedial actions at a site. If the PRPs do not respond to an administrative order, EPA has the option of filing a law suit to compel performance.

Fifth, if PRPs do not perform the response action and EPA undertakes the work, EPA will file suit against PRPs, when practicable, to recover money spent by EPA and deposit it in the Superfund Trust Fund. This is called cost recovery, and it is a major priority under the Superfund program.

THE ENFORCEMENT PROCESS FOR REMEDIAL ACTIONS

PRP Search and Notice

EPA is committed to strengthening efforts to reach settlements with PRPs. EPA believes that settlements are most likely to occur when EPA interacts frequently with PRPs.

ENFORCEMENT AUTHORITIES

The original Superfund program was reauthorized and expanded on October 17, 1986, when President Reagan signed into law the Superfund Amendments and Reauthorization Act of 1986 (SARA). These amendments increased the Superfund Trust Fund to $8.5 billion and clarified and expanded enforcement authorities:

- **Access and Information Gathering** - SARA strengthens EPA's ability to obtain access to investigate sites and to obtain information from parties with knowledge of the site.

- **Settlement Authorities** - CERCLA authorizes EPA to compel a PRP to undertake necessary actions to control the threat of imminent and substantial endangerment to human health or the environment. To accomplish this, EPA may either issue an administrative order or bring a civil action against the PRP in court. SARA outlines specific procedures for negotiating settlements with PRPs to conduct voluntary response actions at hazardous waste sites.

- **Cost Recovery** - Once a Fund-financed response has been undertaken, EPA can recover costs from the responsible parties. Past and present facility owners and operators, as well as hazardous substance generators and transporters, can all be liable under Superfund for response costs and for damage to natural resources. EPA may recover Federal response costs from any or all of the responsible parties involved in a remedial action. The monies recovered go back into the Fund for use in future response actions.

- **Criminal Authorities** - SARA increases criminal penalties for failure to provide notice of a release and makes submitting false information a criminal offense.

- **Citizen Suits** - SARA authorizes a citizen to sue any person, the United States, or an individual State for any violation of standards and requirements of the law, under certain conditions.

Federal Facilities

SARA also adds a section dealing with releases of hazardous substances at Federal facilities. This provision clarifies that Superfund applies to Federal agencies and that they must comply with its requirements. SARA clearly defines the process Federal agencies must follow in undertaking remedial responses. At NPL sites, EPA makes the final selection of the remedy if the Federal agency and EPA disagree. A Federal agency must remediate a Federal facility through an interagency agreement (IAG), except in emergency situations. IAGs are enforceable agreements between Federal agencies that are subject to the citizen suit provisions in SARA and to section 109 penalties, if the responding agency does not comply with the terms of the agreement.

SARA also provides a schedule for response actions at Federal facilities, including a schedule for preliminary assessments, listing on the National Priorities List, remedial investigations/feasibility studies, and remedial actions. State and local officials also must be given the opportunity to participate in the planning and selection of any remedy, including the review of all data. States are given a formal opportunity to review remedies to ensure that they incorporate State standards. Public participation in addressing releases at Federal facilities is enhanced by SARA, which establishes a Federal Agency Hazardous Waste Compliance Docket. This docket functions as a repository of information for the public and is available for public inspection. Every six months after establishment of the docket, EPA will publish in the Federal Register a list of the Federal facilities that have been included in the docket during the preceeding six-month period.

This interaction is important because it provides the opportunity to share information about the site and may reduce delays in conducting response actions.

The enforcement process begins with the search for PRPs, concurrent with NPL listing.

Once identified, PRPs are typically issued a general notice letter. The general notice informs PRPs of their potential liability. The general notice also may include a request for and a release of information on PRPs and the substances at the site. The overall purposes of the general notice are to provide PRPs and the public with advance notice of possible future negotiations with EPA, to open the lines of communication between EPA and PRPs, and to advise PRPs of potential liability.

In addition to the general notices, EPA may issue a "special notice," which invokes a temporary moratorium on certain EPA remedial and enforcement activities. An RI/FS special notice initiates a 90-day moratorium and an RD/RA special notice initiates a 120-day moratorium. The moratorium provides a period of time during which EPA and PRPs negotiate. The goal of negotiations is for EPA and PRPs to reach a settlement where the PRPs agree to conduct and/or finance response activities. Negotiations may be terminated after 60 days for either the RI/FS or RD/RA if PRPs do not provide EPA with a "good faith" settlement offer.

Negotiations for the RI/FS

The PRP may conduct the RI/FS if EPA determines the PRP is qualified to conduct the RI/FS and if the PRP agrees to reimburse EPA for the cost of oversight. The terms of this agreement to conduct the RI/FS are outlined in either an Administrative Order on Consent or a Consent Decree, both of which are enforceable in court. If negotiations do not result in an order or a decree, EPA may use Trust Fund monies to perform the RI/FS and seek reimbursement for its costs.

Negotiations for the RD/RA

Where a special notice is used, the moratorium for RD/RA may be extended to a total of 120 days. The terms of the agreement to conduct the RD/RA are outlined in a Consent Decree, which all parties sign and is entered in court. If negotiations do not result in a settlement, EPA may conduct the remedial activity using Trust Fund monies, and sue for reimbursement of its costs with the assistance of the Department of Justice (DOJ). Or EPA may issue a unilateral administrative order or directly file suit to force the PRPs to conduct the remedial activity.

Administrative Record

The information used by EPA to select a remedy at a site must be made available to the public. This information, including public comments, is compiled and maintained in the administrative record files. The administrative record serves two main purposes. First, it ensures an opportunity for public involvement in the selection of a remedy at a site. Second, it provides a basis for judicial review of the selection.

TOOLS FOR ENFORCEMENT

In addition to outlining the procedures for the enforcement *process*, CERCLA provides *tools* that are designed to help EPA achieve settlements. The CERCLA settlement authorities may be used by EPA to foster negotiations with PRPs instead of taking them to court. EPA believes that PRPs should be involved early in the Superfund process at a site. It is in the best interest of PRPs to negotiate with EPA and to conduct the RI/FS, as this can keep the process smooth and costs can be controlled. EPA actively promotes settlements with PRPs using tools in SARA and is continuing to work towards improvements in the settlement process itself. These new SARA tools include, but are not limited to:

Mixed Funding

CERCLA authorizes the use of "mixed funding." In mixed funding, settling PRPs and EPA share the costs of the response action and EPA pursues viable non-settlers for the costs EPA incurred. Through guidance, EPA discusses the use of three types of mixed funding arrangements. These are "preauthorization," where the PRPs conduct the remedial action and EPA agrees to reimburse the PRPs for a portion of their response costs; "cash-outs," where PRPs pay for a portion of the remedial costs and EPA conducts the work; and "mixed work," where EPA and PRPs both agree to conduct and finance discrete portions of a remedial action. EPA prefers a "preauthorized" mixed-funding agreement, where PRPs conduct the work.

EPA encourages the use of mixed funding to promote settlement and site remediation, but will continue to seek 100 percent of response costs from PRPs where possible. Use of mixed funding does not change EPA's approach to determining liability. PRPs may be held jointly and severally liable and EPA will seek to recover EPA's mixed funding share from non-settling PRPs whenever possible.

De Minimis Settlements

De minimis settlements are smaller agreements separate from the larger settlement for the chosen remedy. Under de minimis settlements, relatively small contributors of waste to a site, or certain "innocent" landowners, may resolve their liability. Innocent landowners are parties who bought property without knowing that it was used for hazardous waste handling. Or EPA may enter into de minimis settlement agreements with a party where the settlement includes only a minor portion of the response costs and when the amount of waste represents a relatively minor amount and is not highly toxic, compared to other hazardous substances at the facility. De minimis settlements also may be used where the PRP is a site owner who did not conduct or permit waste management or contribute to the release of hazardous substances. De minimis settlements are typically used in conjunction with covenant not to sue agreements. These agreements generally will be in the form of administrative orders on consent and are available for public comment.

Covenants Not To Sue

A covenant not to sue may be used to limit the present and future liability of PRPs, thus encouraging them to reach a settlement early. However, agreements generally include "reopeners" that would allow EPA to hold parties liable for

conditions unknown at the time of settlement or for new information indicating that the remedial action is not protective of human health and the environment. In some cases, such as de minimis settlements, releases may be granted without reopeners. Covenants not to sue are likely to be used only in instances where the negotiating PRP is responsible for only a very small portion of a site, and, therefore, EPA is assured that any future problems with the site are not likely to be the result of that PRP's contribution

Non-binding Allocations of Responsibility (NBAR)

NBAR is a process for EPA to propose a way for PRPs to allocate costs among themselves. EPA may decide to prepare an NBAR when the Agency determines this allocation is likely to promote settlement. An NBAR does not bind the government or PRPs and cannot be admitted as evidence or reviewed in any judicial proceeding, including citizen suits. Since each PRP may be held liable for the entire cost of response, regardless of the size of its contribution to a site, knowing EPA's proposed allocation scheme may encourage the PRPs to settle out of court rather than run the risk of being held fully responsible.

STATE PARTICIPATION

The Superfund program allows for and encourages State participation in enforcement activities. First, EPA is required to notify the State of negotiations with PRPs and provide the opportunity for the State to participate. States may be a party to any settlement in which they participate. In addition, EPA is authorized to provide funds to States to allow State participation in enforcement activities and to finance certain State-lead enforcement actions.

PUBLIC PARTICIPATION/COMMUNITY RELATIONS

EPA policy and the Superfund law establish a strong program of public participation in the decision-making process at both Fund-lead and enforcement sites. The procedures and policy for public participation at enforcement sites are basically the same as for non-enforcement sites. This fact sheet is limited to those special differences in community relations when the Agency is negotiating with or pursuing litigation against PRPs. The contact listed below has numerous fact sheets on the Superfund program, including a fact sheet on Public Involvement.

Community relations at enforcement-lead sites may differ from community relations activities at Fund-lead sites because negotiations between EPA, DOJ and PRPs generally focus on the issue of liability. The negotiation process, thus, requires that some information be kept confidential and is not usually open to the public.

When these discussions deal with new technical information that changes or modifies remedial decisions, this information will be documented and placed in the administrative record files. This process provides the public with critical information and enables the Agency to move quickly towards settlement. Information on enforcement strategy, details of the negotiations, such as the behavior, attitudes, or legal positions of responsible parties; and evidence or attorney work product material developed during negotiations, must remain confidential.

FOR MORE INFORMATION:

OSWER DIRECTIVE 9836.0-1A

COMMUNITY RELATIONS DURING ENFORCEMENT ACTIVITIES AND DEVELOPMENT OF THE ADMINISTRATIVE RECORD*

6.1 BACKGROUND AND INTRODUCTION

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended, provides the U.S. Environmental Protection Agency (EPA) with the authority to respond directly or to compel potentially responsible parties (PRPs) to respond to releases or threatened releases of hazardous substances, pollutants or contaminants. CERCLA created two complementary programs aimed at achieving this goal.

Under the first program a trust fund, known as the Superfund, may be available for site remediation when no viable PRPs are found or when PRPs fail to take necessary response actions. PRPs are defined as parties identified as having owned or operated hazardous substance sites, or who transported or arranged for disposal or treatment of hazardous substances, pollutants or contaminants at such sites. The second program provides EPA with the authority to negotiate settlements, to issue orders to PRPs directing them to take necessary response actions, or to sue PRPs to repay the costs of such actions when the trust fund has been used for these purposes. The actions EPA takes to reach settlement or to compel responsible parties to pay for or undertake the remediation of sites are referred to as the Superfund enforcement process.

This chapter includes an overview of the CERCLA enforcement program, and a discussion of enforcement activities, community relations, and the administrative record. It provides specific discussions on community interview planning and development of community relations plans (CRPs) for enforcement-lead sites; enforcement activities requiring public participation; community relations during specific enforcement actions and settlements; and the relationship between the administrative record for response selection and community relations. The chapter is intended to discuss only how enforcement activities should be considered during overall community relations program planning and implementation. In developing this chapter, the Agency refrained from repeating information contained elsewhere in the Handbook.*

*This memorandum replaces current OSWER Directives 9836.0 and 9836.0-1a, and is the new Chapter 6 of the Community Relations in Superfund: A Handbook (hereinafter referred to as the Handbook).

6.2 APPLICABILITY

This policy applies to all Fund-financed, Federal enforcement, CERCLA-funded State enforcement, and PRP-lead removal and remedial actions, as defined in the National Contingency Plan (NCP). The information contained in this chapter is consistent with and serves to implement the NCP. It creates no rights and/or obligations of any party.

6.3 OVERVIEW OF THE CERCLA ENFORCEMENT PROGRAM

A primary goal of CERCLA is to compel PRPs to remediate sites that are releasing or threatening to release hazardous substances into the environment. The enforcement process may involve the following major efforts.

First, EPA attempts to identify PRPs as early as possible. Where practicable, EPA generally notifies these parties of their potential liability for response work when the site is scheduled for some action; EPA will then encourage PRPs to do the work.

If the PRPs are responsive and EPA believes the PRPs are willing and capable of doing the work, EPA will attempt to negotiate an enforcement agreement with the PRP(s). The enforcement agreement may be an agreement entered in court (e.g., a judicial consent decree) or it may be an agreement signed by EPA and the PRPs outside of court (an administrative order on consent). Both of these agreements are enforceable in a court of law, and are subject to EPA oversight of the work performed by PRPs.

If a settlement is not reached, EPA can use its authority to issue a unilateral administrative order, which directs PRPs to perform removal or remedial actions at a site. If the PRPs do not respond to an administrative order, EPA has the option of filing a law suit to compel performance.

Finally, if PRPs do not perform the response action and EPA undertakes the work, EPA may file suit against PRPs to recover money spent by EPA from the Superfund. This is known as cost recovery and is a major priority under the CERCLA program.

The Appendix to this chapter, a fact sheet on the enforcement process, explains in simple terms the tools and authorities provided by CERCLA, and the methods EPA may use to negotiate settlements with PRPs.

EPA must strive to help communities understand Superfund program goals and activities, including enforcement actions. In this effort, the lead agency needs to consider the concerns of the local community. By identifying community concerns, the Agency can attempt to develop alternatives to response actions or

a variation to a remedial action plan that may better meet the needs of the local residents.

6.4 COMMUNITY RELATIONS RELATED TO ENFORCEMENT ACTIVITIES AND ADMINISTRATIVE RECORDS

In fostering community relations during enforcement actions, Community Relations Coordinators (CRCs) should follow the same essential steps as for Fund-financed actions. The planning steps that are critical to community relations are conducting community interviews and developing community relations plans (CRPs). Once the CRP has been developed, the CRC and other members of the site team should insure that implementation follows this CRP. The administrative record file can be used to insure that the public knows what is happening at the site, as well as how to get involved in determining what happens at the site. This chapter emphasizes the enforcement aspects of these activities and recognizes the possibility of PRP interest in participating in these and other activities.

6.4.A Planning Community Interviews and Developing Community Relations Plans (CRPs)

6.4.A-1 Community Interviews

In addition to general preparation for community interviews (see Chapter 3 of the Handbook), community relations staff should discuss the site with other Regional staff in order to identify what special precautions, if any, should be taken in the course of conducting the community interviews (e.g., sensitivity to pending litigation or the political climate of the community). By discussing the site with regional technical and legal staff in advance of the community interviews, community relations staff can be apprised of any situations that might impact on these interviews. With or without viable PRPs, the Remedial Project Manager (RPM) should participate in the community discussions.

The regional comunity relations staff, with the RPM or enforcement staff, conducts discussions with different groups before developing the CRP. It is important to note that some interviews may already have been conducted in the community as part of the listing process for the National Priorities List (NPL). These discussions, however, do not replace community discussions held during development of a CRP. The information sought during the CRP development covers specific areas that are not necessarily discussed - or asked - during the listing process. Also, CRCs are not, nor should they be, investigators of PRP actions at the site. During community discussions, if information is volunteered, the CRC should advise the resident that enforcement officers will follow up on this information.

To incorporate the full range of views, lead agency staff may consider interviewing PRPs in the community. Every site varies and so also do PRPs, their contribution to the site, and their standing in the community. In some cases, only the current owner or operator is contacted. The enforcement team for the site will determine who to interview. This team is comprised of a CRC, the on-scene coordinator, regional counsel, the RPM, the Enforcement Project Manager (EPM), as well as equivalents at the State level when the State has the lead.

6.4.A-2 Community Relations Plans

Using information obtained during the community interviews, the lead agency develops a community relations plan (CRP) that reflects consideration of the concerns and communication methods preferred by the community. The CRP format is fully described in Chapter 3 and Appendix B of the Handbook. In addition, the CRP includes two appendices; the first presents EPA's contact list of key community leaders and interested parties. Note that the list of community contacts will not be in the Appendix if it contains private citizens' addresses and phone numbers. On the other hand, public agencies, elected officials, and local groups' addresses can be included in the administrative record and information repositories. The second appendix outlines suggested locations of meetings, the administrative record and information repositories. These are all public information.

The CRP is a critical planning tool for lead agency staff and for the public, as it will likely reach and impact many people. CRPs prepared for sites with viable PRPs should receive input from all members of the enforcement team who are directly affected by the scheduled activities in the CRP. For example, attorneys should approve the accuracy of any legal information; the RPM or EPM should approve the accuracy of any technical information; and the CRC should approve the accuracy of the community relations techniques used in the CRP. The CRC is ultimately responsible for insuring that the community relations requirements of CERCLA/SARA are implemented. Therefore final approval of the CRP should be by the CRC, with concurrence on specific sections by members of the team.

Coordination activities among the CRC, on-scene coordinator, regional counsel, the RPM, and the EPM, depend on the site-specific situation. The key initially is to plan activities and establish procedures for reviewing information. Adequate planning should prevent the release of information that might be detrimental to the settlement and/or litigation process. Internal discussions with all team members during project planning may be a useful mechanism for guarding against such releases. This need for coordination is perhaps the most crucial message put forth in this guidance. Although EPA must share information about a site with the people directly affected by the

site, this information exchange should be technical and not legalistic, and should be coordinated so as not to jeopardize negotiations with PRPs.

Community relations activities outlined in a CRP for an enforcement site should be consistent with the settlement process and the likely schedule of enforcement actions. Techniques peculiar to enforcement sites (such as the technical discussions outlined in Section 6.4.B-7) may be identified in the CRP as community relations activities. [Within the various sections and appendices of a CRP, the CRC staff may wish to document EPA's approach to coordinating and sharing information with PRPs. However, any special conditions on Agency interaction with the PRPs should be spelled out in the administrative order or consent decree, not in the CRP. The public must be told early if PRPs are willing to participate in implementing the CRP. The CRC staff can do this by preparing a fact sheet or stating this at a public meeting.] Discussions about the PRPs prior to signing a consent agreement, however, can cause delays in the negotiations. It is preferrable to delay discussing details of PRP involvement with the site until some agreement is signed or action taken. If the PRPs are to be a part of the community relations program, early comments can cause tension and mistrust between Agency staff and the PRP.

Assuming a site has not been referred for litigation, the CRP only needs to inform the public of the possibility of litigation. CRC staff may choose to describe the litigation process, and discuss the potential effects of litigation on the scope of community relations activities. If the site is referred later for litigation, the CRP is to be modified to provide that statements about the litigation, other than public information that can be ascertained from court files, must be cleared with the Department of Justice before issuance. The regional counsel team member will be the focal point for that clearance, as well as for consulting with DOJ on statements concerning site status, such as investigations, risk assessments and response work. The plan will be amended to reflect any potential effects this could have on community relations activities. When referral for litigation is the initial enforcement action, the original community relations plan should specify the activities that are to be conducted during litigation, to the extent they can be determined at that time. Section 6.4.D-2 of this policy discusses the litigation process.

6.4.A-3 Potentially Responsible Party (PRP) Involvement

EPA is the lead agency for developing and implementing community relations activities at an EPA "PRP-lead" site. A PRP may assist in the implementation of community relations activities at the discretion of the Regional office. The Regional office, however, will oversee PRP community relations implementation. Specifically, PRPs may be involved in community

relations activities at sites where they are conducting either the remedial investigation/feasibility study (RI/FS), or the remedial design/remedial action (RD/RA), or both. If a PRP will be involved in community relations activities, the CRP should reflect that involvement. In these cases, the PRPs may wish to participate in public meetings, or in the preparation of fact sheets. EPA, however, will not "negotiate" the contents of press releases with PRPs.

When complete and final, the CRP should be provided to all interested parties, and placed in the administrative record file and information repository for the particular site. If the CRP is revised, the final revised copy should be made available to the public, and placed in the administrative record file and the information repository, as well.

6.4.B Enforcement Activities and Community Relations at Remedial Sites

The following subsections present an overview of the notice process leading to the initiation of RI/FS or RD/RA negotiations, community relations following an RI/FS order, public comment on RD/RA consent decrees, community relations during PRP remediation, and technical discussions.

6.4.B-1 Introduction

Community relations activities should be planned as early in the process as possible. Generally, this occurs before the RI/FS special notice, which is discussed below. Meetings with small groups of citizens, local officials and other interested parties are extremely helpful for sharing general information and resolving questions. These meetings also may serve to provide information on EPA's general enforcement process, perhaps through distribution of the fact sheet attached to this guidance. A discussion of how EPA encourages settlements may be appropriate at this time.

Litigation generally does not occur until after the remedy is selected (after the moratorium period that begins when the special notice for RD/RA ends, as discussed below). EPA staff, however, may need to explain early in the process that legal constraints may apply during negotiations or litigation with respect to community relations activities.

6.4.B-2 Notice to PRPs

Notice letters are used to inform PRPs of their potential liability and provide an opportunity for them to enter into negotiations, which are intended to result in PRPs conducting or financing response activities. The negotiation process may include "informal" and "formal" negotiations.

EPA has established a discretionary three-step notification process to facilitate and encourage settlements at remedial sites. First, well before the RI/FS starts, EPA usually sends a general notice to PRPs. Second, a special notice for the RI/FS may be sent in appropriate circumstances. Third, a special notice for the RD/RA may be sent, where appropriate.

The general notice advises PRPs of possible liability. The special notices initiate formal negotiations and invoke a moratorium on EPA conducting the RI/FS or response action, while encouraging PRP participation in response activities at a site. For remedial sites, RI/FS special notices should be issued at least 90 days before EPA plans to obligate Fund money for the RI/FS. For an RD/RA, the preferred approach is to issue special notices at the time the FS and proposed work plan are released for public comment, although notice may be issued after the Record of Decision (ROD) is signed. Once the special notice is sent, a 60-day moratorium on EPA's conduct of certain response activities is triggered. If a "good faith" offer is not received within 60 days, EPA may proceed with its own RI/FS or removal, or take enforcement action against the PRP. If a good faith offer is received, EPA's goal is to conclude RI/FS negotiations with an administrative order on consent within 90 days of the RI/FS special notice. RD/RA negotiations are targeted for conclusion with an RD/RA consent decree within 120 days of the RD/RA special notice. These are statutory moratorium periods. The timeframe for the RD/RA special notice moratorium may be extended for 30 days by the Regional Administrator and beyond that by the Assistant Administrator, OSWER. Special educational efforts should be conducted prior to negotiation/ moratorium to warn the public that little if any information will be available to the public during negotiations (see below).

Detailed guidance on issuance of notice letters is discussed fully in the "Interim Guidance on Notice Letters, Negotiations, and Information Exchange" (October 19, 1987), 53 FR 5298 (OSWER Directive #9834.1).

6.4.B-3 Negotiations

Negotiations are generally conducted in confidential sessions between the PRPs and the Federal government. Neither the public, nor the technical advisor (if one has been hired by a community) may participate in negotiations between EPA, DOJ and the PRPs unless everyone agrees to allow such participation. Otherwise the ability of the parties to assert confidentiality at some later date may be affected.

The confidentiality of statements made during the course of negotiations is a well-established principle of our legal system. Its purpose is to promote a thorough and frank discussion of the issues between the parties in an effort to resolve differences.

Confidentiality not only limits what may be revealed publicly, but also ensures that offers and counter-offers made in the course of negotiations may not and will not be used by one party against the other in any ensuing litigation.

Potentially responsible parties may be unwilling to negotiate without the guarantee of confidentiality. They may fear public disclosure regarding issues of liability and other sensitive issues which may damage their potential litigation position or their standing with the public. This expectation of confidentiality necessarily restricts the type and amount of information that can be made public.

CRC staff should consult with and obtain the approval of other members of the technical enforcement and regional counsel team before releasing any information regarding negotiations. If the site has been referred or is in litigation, DOJ approval should also be obtained. In lieu of direct participation by the public in negotiation sessions, the CRC staff may wish to send out the fact sheet on the Superfund enforcement process attached to this guidance, along with the moratorium schedules for that specific site.

6.4.B-4 Community Relations Following an RI/FS Order

As discussed above, RI/FS settlements usually are resolved as administrative orders on consent. For remedial sites, an RI/FS workplan is a trigger for implementation of community relations activities. When the workplan is complete, a "kick-off" meeting with the public may be conducted in order to present the final workplan and explain the next steps. If held, CRC staff should make it clear that EPA approved the workplan; announce how the PRP will be performing the RI/FS; explain EPA's oversight role; discuss the enforcement process and confidentiality requirements; and explain where EPA's record files will be/or are located. As discussed in section 6.4.E, the administrative record file will be available at a central regional location, and at or near the site. Since it contains information which the lead Agency uses in selecting a final remedy, the administrative record file should be used as a tool to facilitate public involvement.

Once the RI/FS has been completed, the agency will issue the proposed remedial action plan, and publish a notice announcing a public comment period. At a minimum, the notice must be published in a major local newspaper of general circulation. A formal comment period of not less than 21 calendar days must be provided for the public to submit oral and written comments. Note that proposed revisions to the National Contingency Plan (NCP) suggest extending this to not less than 30 calendar days.

An opportunity for a public meeting is also required to be offered during the comment period, as well as a transcript of the

meeting on the proposed plan. The transcript must be made available to the public in the administrative record, and may be distributed in the information repositories and on request. See Chapter 4 of the Handbook for a complete outline of these specific public participation requirements.

Once the public comment period on the proposed plan has closed, a responsiveness summary is prepared which serves two purposes. First, it provides lead agency decision-makers with information about community preferences regarding both the remedial alternatives and general concerns about the site. Second, it demonstrates to members of the public how their comments were taken into account as an integral part of the decision-making process. A Record of Decision (ROD) is then issued by EPA as the final remedial action plan for a site. Both the ROD and the responsiveness summary will be placed in the administrative record file and other information repositories. In addition, the responsiveness summary may be distributed to all those who commented and to the entire site mailing list. See Chapter 4 of the Handbook for further information on requirements for public notice and availability of the ROD and responsiveness summary.

6.4.B-5 Public Notice and Comment on Consent Decrees for RD/RA

If a negotiated settlement for remedial action under CERCLA section 106 is reached, it will be embodied in a proposed consent decree (to be entered by a court). CERCLA section 122(d)(1) requires the use of consent decrees as the vehicle of agreement between the Federal Government and PRPs on remedial actions taken under section 106 of CERCLA. CERCLA section 122 contains specific public participation requirements. The Department of Justice lodges (provides a copy of) the consent decree with the court, publishes a notice of the proposed consent decree in the Federal Register, and offers an opportunity for non-signatories to the agreement to comment on the proposed consent decree before its entry by the court as a final judgment. The public comment period must not be less than 30 calendar days in length and may be extended if warranted. The proposed consent decree may be withdrawn or modified if comments demonstrate it to be inappropriate, improper or inadequate.

In order to ensure that public comment opportunities are extended to interested parties, EPA staff routinely prepare a press release to be issued after the consent decree has been lodged as a proposed judgment with the court. DOJ should notify the regional counsel for the particular site and provide a copy of the Federal Register notice of the decree. Regional counsel will assure that the RPM and CRC are informed of this event. CRC staff can then mail copies of the press release or copies of the Federal Register notice to persons on the site mailing list. The press release should indicate that copies of the consent decree document may be obtained, including its location and that of any

other relevant documents. The procedures for public comment on the consent decree, as well as a contact name for obtaining further information, should also be announced. The public notice and press release for the consent decree may be combined, if appropriate.

The ROD and responsiveness summary have usually been made public by this time. However, inasmuch as comments previously were requested on the proposed plan, comments are requested only on the consent decree. Communications with the public should focus on the remedial provisions of the settlement agreement. Details of the negotiations, such as the behavior, attitudes, or legal positions of PRPs, any compromises incorporated in the settlement agreement, and evidence or attorney work-product material developed during negotiations, must remain confidential.

If a negotiated settlement for RD/RA results in actions fundamentally different from those selected in the ROD, the ROD will have to be amended. An amendment to a ROD also requires a public comment period, which should coincide if possible, and be held jointly with, the comment period for the consent decree.

A public meeting may be held during the public comment period, at the site team's discretion. Regional staff must offer the opportunity for a public meeting when there are significant community issues or concerns, or for other reasons which are determined by and based upon the judgment of EPA regional staff. If held during the public comment period, these meetings need to be documented, and significant oral comments received during the meeting must be addressed in the responsiveness memorandum on the consent decree.

Once the public comment period on the proposed consent decree has closed, DOJ staff (in cooperation with EPA staff) must consider each significant comment and write a response. Assuming that EPA and DOJ continue to believe the decree should be entered, DOJ will then file a Motion to Enter with the court, the responsiveness memorandum, the comments received, and the consent decree itself. The responsiveness memorandum and motion to enter the consent decree are released to the public at the same time. The Regional team will use information repositories, administrative record files, and/or other means to make these documents available to the public.

6.4.B-6 Community Relations During PRP Remediation

EPA retains responsibility for community relations during a PRP-managed remedial action pursuant to a consent decree or any enforcement order. The scope and nature of community relations activities will be the same as for Fund-lead response actions. When PRPs participate in community relations activities at the site, EPA and PRP roles need to be determined and explicitly defined. Where a PRP has not been involved in the initial stages

of implementing the community relations plan, but shows sufficient interest, commitment and capability to warrant some level of participation, EPA should re-evaluate its role in conducting community relations activities. In that case, a new CRP may be developed at the discretion of the regional team. PRP roles in conducting community relations may also be addressed in the consent decree or other enforcement orders.

6.4.B-7 Technical Discussions

Technical meetings are considered informational, and provide orientation to the enforcement process. One of the objectives in holding technical meetings is to describe, instruct, and explain how the remedy may or will (depending on whether a ROD has been signed) address the conditions of the site. Workshops exploring the approach to the site and project status, can occur at any point up to and beyond remedy selection. If held during RI/FS or RD/RA negotiations, they should be separated from the legal discussions. The RPM may host a technical discussion without PRP concurrence; however, willingness by the PRPs to participate may facilitate a more open and honest dialogue with the community.

Technical information must be documented and available for the public in the administrative record file. Technical or factual information which comes up during negotiations should also be included in the administrative record file. Issues of liability, however, are appropriately discussed only during negotiations between EPA and PRPs, and should not be included in the administrative record file.

Technical assistance grants are authorized under section 117(e) of CERCLA, which allows EPA to make grants available to communities affected by a release or threatened release at an NPL site. Community groups may use these grants to obtain assistance in interpreting technical information on the nature of the hazard and recommended alternatives for investigation and cleanup.

6.4.C Community Relations During Removal Actions

EPA will encourage public participation during removal actions to the extent possible. However, there will be times when this participation may need to be constrained. The NCP, the Handbook, and Removal Procedures establish the requirements for removal actions, including administrative record requirements.

The enforcement program encourages PRPs to conduct or pay for removal actions. At any time, the Agency may arrive at an agreement with the PRPs to conduct a removal, which would usually be embodied in an administrative order on consent. EPA also may issue a unilateral administrative order to compel a PRP to undertake a removal or other action. In addition, under limited circumstances, the Agency may refer the action to DOJ, seeking a court order to secure the removal.

By their nature, the situations that require emergency removals do not allow for extensive public involvement. Adjustments to the community relations process must be made to accommodate necessary time constraints. It is proposed in the draft NCP that a public comment period of at least 30 days be required for removals with a planning period of at least 6 months before the initiation of on-site activity. For removals with a planning period of less than 6 months before the initiation of on-site activity, a public comment period may be held where appropriate. The public comment period, if held, begins when the record file is made available for public inspection.

A unilateral administrative order or administrative order on consent is a public document and should be made available to the affected community at a minimum, through the administrative record file. In addition, community relations staff should discuss the terms of the order with and describe the removal action to citizens, local officials, and the media. If the PRP subsequently fails to respond to the order, any public statements or information releases regarding the status of actions at the site or prospective EPA actions should first be cleared with appropriate Regional technical and legal enforcement personnel.

Community relations activities during removals conducted by PRPs should be the same as for Fund-financed removals. PRPs may participate in community relations, subject to the same considerations described previously in this guidance under Section 6.4.A-3.

6.4.D Community Relations During Specific Enforcement Actions and Settlements

6.4.D-1 Consent Decrees, De Minimis and Cost Recovery Settlements

Under section 122(d)(1) of CERCLA, settlements for remedial action are to be in the form of consent decrees filed in Federal court. Section 122(d)(2)(B) requires DOJ to provide an opportunity for public comment on proposed consent decrees. This concept is discussed in section 6.4.B-5.

Section 122(i) of CERCLA requires the lead Agency to publish a notice of proposed settlement, for both administrative orders on consent under section 122(g)(4) (de minimis settlements), and under section 122(h) (cost recovery settlements/arbitration). The notice published in the Federal Register must identify the facility concerned and the parties to the proposed settlement.

A public comment period of not less than 30 days is required for these agreements. Regional staff should provide notice (e.g., a press release, notice to persons on the site mailing list or an ad in the newspaper of local circulation) to supplement the Federal Register notice. The press release should

provide a contact for further information.

The lead agency with jurisdiction must consider any comments filed, and determine if the proposed settlement requires modification where comments demonstrate that the proposed agreement is inappropriate, improper or inadequate, or can become effective without change. The final settlement and the response to comments must be released at the same time and be made available to the public. This can be accomplished by placing both documents in the administrative record file. The response to comments document (responsiveness summary) should also be sent directly to those who commented. PRPs who are party to the settlement will receive notice from the Agency that the agreement will go into effect unchanged or that modifications are required. A statement that the responsiveness summary may be obtained from the administrative record file or upon request should be added to this notice.

6.4.D-2 Injunctive Litigation

At any point in the enforcement process, a case may be referred to DOJ for litigation, and community relations activities may change in scope. Referral is likely to occur most frequently for RD/RA after the moratorium has concluded. If litigation is initiated early in the enforcement process, the CRP for the site may need to be modified substantially. If litigation is initiated late in the process (e.g., after the conclusion of the RD/RA special notice moratorium), the plan will require only the addition of the litigative process.

When a case has been referred to DOJ, community relations activities at the site should be re-evaluated by the site team, and changes necessary to accommodate confidentiality should be agreed upon by the site team, including DOJ. While strong consideration should be given to implementing the plan as developed and previously approved, the litigation process may require changes in public disclosure. For example, the court may impose a gag order or place restrictions on information releases during negotiations or any meetings with the public to discuss potential site remedy. Under these circumstances, the DOJ attorney will advise the site team on how to proceed.

6.4.D-3 Cost Recovery

If a Fund-financed cleanup is conducted, EPA may initiate litigation to recover the costs of response. Since cost recovery generally follows removal actions or initiation of remedial action, community interest in the site usually will have lessened, unless other operable units remain to be addressed.

A spokesperson chosen by the site team, in coordination with DOJ, should take the lead in responding to inquiries regarding current site conditions. All inquiries regarding litigation

should be forwarded to the EPA cost-recovery team, which will prepare a response subject to the concurrence of DOJ.

6.4.D-4 Interaction with RCRA and other Federal and State Laws

On May 5, 1987, the Office of Solid Waste and Emergency Response issued guidance for public involvement in RCRA section 3008(h) actions (OSWER Directive #9901.3). This guidance establishes the process for public involvement in actions taken under section 3008(h) of RCRA.

Section 3008(h) of RCRA, the interim status corrective action authority, allows EPA to take enforcement action to require cleanup at a RCRA interim status facility when the Agency has information that there has been a release of hazardous waste or hazardous constituents. Two orders will frequently be used to implement the cleanup program. The first order requires the facility owner or operator to conduct a Corrective Measure Study/RCRA Facility Investigation (RFI/CMS), similar to the RI/FS. Once the remedy has been selected, a second order requires design, construction, and implementation of that remedy.

The RCRA guidance outlines both minimum public involvement requirements and expanded public involvement suggestions. In many ways the RCRA guidance uses procedures and ideas drawn from the Superfund community relations program. Thus, coordination between Superfund and RCRA personnel at sites where actions under both CERCLA and RCRA are anticipated is appropriate. Superfund CRCs may want to become familiar with this guidance and with the RCRA Public Involvement Coordinators to ensure that the Agency presents a coordinated approach.

Familiarity with other Federal or state laws such as the Clean Air Act, Clean Water Act, etc. will generally make the role of the CRC easier, for frequently many media are represented at a hazardous waste site. A general knowledge of Federal or state requirements may help the CRC in conversing with the public.

6.4.E The Administrative Record As Part of Community Relations

6.4.E-1 Overview

Section 113(k)(1) of CERCLA requires the establishment of an administrative record upon which the selection of a response action is based. It also requires that a copy of the administrative record be located at or near the site. Section 113(k)(2) of CERCLA requires that the Agency promulgate regulations outlining procedures for interested persons to participate in developing the administrative record. The Agency is addressing these statutory requirements through revisions to the NCP and through the development of a guidance document.

Throughout the decision-making process, from remedial

investigation to selection of remedy, the administrative record file will be available for public inspection at a central regional location and at or near the site. The information in the file is crucial to the public in that it contains the information upon which the lead Agency bases its decisions toward selecting a final remedy. Community relations staff should use the administrative record file as a tool for facilitating public involvement.

Publicly-available documents concerning response selection must be made available to all interested parties at the same time. EPA staff should avoid situations where local residents are provided opportunities to review and comment on site information and other members of the public are not provided the same opportunity. Similarly, if EPA requests PRPs to review a plan, EPA should enable other members of the public to review that plan as well. When a kick-off meeting is scheduled to explain the final workplan and obtain opinions, the public, including residents and PRPs, should be invited.

The administrative record file and CRP for a remedial action should be made available to the public no later than the time the remedial investigation phase begins, which is usually when the RI/FS workplan is approved. The timing for establishing the administrative record file for a removal action will depend on the nature of the removal. As proposed in the draft NCP, for removals with a planning period of at least six months before on-site activities will be initiated, the record file must be made available to the public when the engineering evaluation/cost analysis (EE/CA), or its equivalent, is available for public comment. For removals with a planning period of less than six months, the record file must be available to the public no later than 60 days after the initiation of on-site cleanup activity.

6.4.E-2 Purpose of the Administrative Record

The administrative record has a two-fold purpose. First, the record provides an opportunity for the public to be involved in the process of selecting a response action. During the selection of a response action, information is reviewed and made available in the publicly accessible administrative record file. Second, if the Agency is challenged concerning the adequacy of a response action, judicial review of a response action selection will be limited to the administrative record. By limiting judicial review to the record, a court's review is based upon the same information that was before the Agency at the time of its decision. The public should be advised that their comments must be submitted in a timely manner in order to be considered.

6.4.E-3 Community Relations Coordinator Responsibilities for the Administrative Record

The OSC/RPM and regional attorney, with the support of the administrative record coordinator, are responsible for deciding which documents are to be included in the administrative record, and ensuring its adequate compilation and maintenance. The Regional Administrator or his designee is responsible for the certification of the record for litigation. CRCs will have some general duties in developing the record file, but every region has defined different roles. In general, however, the CRC duties will center on the relationship of the administrative record file to the information repositories, public notices and public comments.

First, CRCs and administrative record staff must coordinate the location of the administrative record file and information repositories. The statute requires that the administrative record be available at or near the facility at issue, and that information be available for public inspection and copying. If the information repository does not contain a copying facility, the Region or State may want to make arrangements for copying the record file. EPA, however, is not required to copy the information for interested persons.

Second, the notice of availability for the administrative record must be published in a major local newspaper of general circulation. A copy of the public notice must also be placed in the administrative record file and may be made available to the public through the community relations mailing list. (See the Overview section above for a discussion of when the administrative record file must be made available to the public.) This notice may be combined with other notices of availability depending on the timing of activity at a site, e.g., a notice of availabilty of the information repository. Where appropriate, a notice of availability of the record file or of commencement of the public comment period may be published in the Federal Register. The public is not notified each time a document is added to the record file. These notices should be coordinated between the CRC and administrative record staff in order to use resources most efficiently. For a more complete discussion of the notice of availability, see the Guidance on Administrative Records for Selection of CERCLA Response Actions (OSWER Directive #9833.3A).

Third, the completed CRP must be placed in the administrative record file. Community Relations Coordinators must advise the Administrative Record Coordinator that the CRP is final and provide him/her with a copy.

Fourth, information contained in records of communication that were generated by the community relations staff and considered or relied on in selecting a response should be

included in the record file. In addition, Superfund CRCs should take appropriate steps to ensure that any community relations documents that are required to be placed in the administrative record file are provided to the Regional official responsible for the record file.

Fifth, the text of all comments, criticisms and new information submitted by the public, including PRPs, during the public comment period must be included in the record file. A response to all significant comments (i.e., the responsiveness summary) must also be placed in the administrative record file. The responses may be combined by subject or other category in the record file.

The record file should reflect the Agency's consideration of all significant public comments. The Agency has no duty to respond to comments it receives during a formal comment period until the close of that formal public comment period. If the Agency chooses to respond to a comment made prior to a formal public comment period, the response must be included in the record file. The Agency may suggest that comments submitted prior to a formal public comment period be resubmitted during the comment period if the commenter desires a response. Or the Agency may notify a commenter that the Agency will respond to the comment in a responsiveness summary prepared at a later date.

Comments which are received after the formal comment period closes and before the decision document is signed should be included in the record file but labeled "late comment." Since a responsiveness summary may already have been prepared at this point, the Agency must respond to late comments only if they contain significant new information not contained elsewhere in the administrative record which could not have been submitted during the public comment period, and which substantially support the need to significantly alter the response action.

Comments received after the decision document is signed should be placed in a post-decision document file. They may be added to the record file if: the documents concern issues relevant to the selection of the response action that the decision document does not address or reserves to be decided at a later date; or where there is a significant change in a response selection which is addressed either by an explanation of significant differences, or in an amended decision document. The Guidance on Administrative Records cited above gives additional information in this regard.

6.4.E-4 Additional Community Relations Coordinator Responsibilities

Because of regional differences CRCs may have additional, general responsibilities, including:

- Assessing the impact of the administrative record file on local information repositories by consulting with officials at the repositories. This must be done in coordination with the Administrative Record Coordinator. CRCs should advise the public where the administrative record file is located.

- Providing the Administrative Record Coordinator with information as to how to notify the public of the availability of the record file. This notification may be in addition to the newspaper notice.

- Making available the transcript of the local meeting on the proposed plan, as required under section 117(a) of CERCLA.

- Providing assistance to the Administrative Record Coordinator to ensure that final comments made by EPA on important documents generated by the State or a Federal facility are documented in writing and submitted to the State or Federal facility staff for inclusion in the administrative record file. States and Federal facility staff will compile and maintain the administrative record files for those sites.

All staff involved in Superfund activities must become familiar with the administrative record requirements.

6.4.E-5 Relationship Between the Administrative Record and Information Repositories

Section 113(k)(1) of CERCLA requires that "the administrative record shall be available to the public at or near the facility at issue." Duplicates of the administrative record may be placed at any other location. The original files concerning response action selection should be located at the EPA Regional office. A copy of these files must be located at or near the site. The draft NCP proposes that an exception be made for emergency removal actions where on-site activities cease within 30 days of initiation.

Section 117(d) of CERCLA requires that "each item developed, received, published, or made available to the public under section 117 shall be available for public inspection and copying at or near the facility at issue." These items are generally included in the information repository.

The administrative record file at or near the site at issue should be located at one of the information repositories that already may exist for community relations purposes. The information repository, maintained by the Community Relations Coordinator, may contain additional information of interest to the public, that is not necessarily part of the administrative

record file (e.g., press releases and newspaper articles). Documents in the administrative record file should be separated from the other materials in the information repository.

EPA typically uses local libraries, town halls, and public schools as locations for establishing repositories and administrative record files because they are publicly accessible. In some instances, the volume of information available for community relations and administrative record purposes may be larger than the capacity of these locations. Where the space of the information repository is inadequate for supporting the administrative record file, an alternate location for the administrative record file should be established. Administrative Record Coordinators should estimate the volume of information expected to be included in the repository and meet with appropriate local officials to discuss space requirements. In some situations, separate locations may have to be established. Administrative Record Coordinators and CRCs must inform one another of any additional information placed in these separate locations to ensure uniformity. CRCs should carefully review their responsibilities for the administrative record (Section 6.4.E-3).

Each administrative record file must be indexed. This index identifies all the documents which comprise the record file, and lists those documents which do not have to be present in the record file because of their voluminous nature (raw data for example), but which are considered part of the record. Their location must be provided. This index is part of the record file and must be available at each record file location.

Finally, interested parties should be able to easily find the document(s) they need. Documents in the administrative record file should be well organized. The CRC and administrative record staff should coordinate with the State in closing information repositories and record files at the end of operation and maintenance, and following a five-year review.

DOC. NO. : CLLJ-00549-12.0d-09/13/88

6263.

DEPARTMENT OF THE NAVY

NAVAL FACILITIES ENGINEERING COMMAND

200 STOVALL STREET

ALEXANDRIA, VA 22332-2300

5090
181A
13 SEP 1988

From: Commander, Naval Facilities Engineering Command

Subj: ENVIRONMENTAL PROTECTION AGENCY (EPA) FINAL RULES ON POLYCHLORINATED BIPHENYLS (PCB)

Encl: (1) Major Provisions of Final Rule Amending 40 CFR 761, Polychlorinated Biphenyls in Electrical Transformers (Federal Register of 19 July 1988)
(2) Major Provisions of Final Rule Amending 40 CFR 761, Polychlorinated Biphenyls; Exclusions, Exemptions and Use Authorizations (Federal Register of 27 June 1988)
(3) Federal Register, 19 July 1988, pages 27322 through 27329
(4) Federal Register, 27 June 1988, pages 24206 through 24221

1. The Environmental Protection Agency (EPA), through two separate Federal Register actions, recently amended existing regulations concerning polychlorinated biphenyls (PCBs). Enclosures (1) and (2) summarize these amended rules. Enclosures (3) and (4) provide the complete Federal Registers amending the regulations.

2. Our point of contact for PCB matters is Barbara Sparks, Code 181A, Autovon 221-8531/8176 or Commercial (202) 325-8531/8176.

T. J. ZAGROBELNY
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DOC NO: CLEJ-00544-12.02-09/13/88

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MAJOR PROVISIONS OF FINAL RULE AMENDING 40 CFR 761, POLYCHLORINATED BIPHENYLS IN ELECTRICAL TRANSFORMERS, FEDERAL REGISTER OF 19 JULY 1988

Reference: (a) CNO ltr 5090, Ser 451/5U395842 of 18 Oct 85

1. Installation of PCB Transformers: After 1 Oct 1985, you cannot install PCB transformers in or near commercial buildings, except for the following two cases:

a. In emergency situations, PCB transformers may be installed until 1 Oct 1990. These transformers may only be used for 1 year or until 1 Oct 1990, whichever is earlier. For example, this means that if you install a PCB transformer in a commercial building (emergency situation) on 25 September 1990, it must be removed within 5 days. The owner must maintain documentation on the emergency installation. 40 CFR 761.30(a)(1)(iii)(B)(1) gives specifics on this documentation. If emergency installation occurred between 1 Oct 1985 and 1 Sep 1988, the transformer owner must notify the EPA Regional Administrator in writing by 3 Oct 1988. This notification must include the documentation information required by 40 CFR 761.30(a)(1)(iii)(B)(1). EPA defines "emergency situation" as when immediate transformer replacement is needed to continue service to power users and neither a non-PCB transformer nor a PCB-contaminated transformer is readily available for installation (i.e., available within 24 hours).

b. Retrofilled PCB transformers may be installed for purposes of reclassification until 1 Oct 1990. The EPA defines "retrofill" as removing PCB or PCB-contaminated dielectric fluid and replacing it with either PCB, PCB-contaminated, or non-PCB dielectric fluid. Retrofilled transformers may be used for 18 months after installation or until 1 Oct 1990, whichever is earlier. For example, a retrofilled transformer installed on 25 Sept 1990 must be removed on 1 Oct 1990. If the transformer is reclassified, that is, tested after 3 months of operation and found to be PCB-contaminated or non-PCB, the transformer may be left in place after the 18 month/1 Oct 1990 deadline. Transformer owners must maintain the documentation specified in 40 CFR 761.30(a)(1)(iii)(C)(1). If PCB transformers were installed for reclassification between 1 Oct 1985 and 1 Sep 1988, the transformer owner must notify the EPA Regional Administrator in writing by 3 Oct 1988. This notification must include the documentation information required by 40 CFR 761.30(a)(1)(iii)(C)(1).

Note that EPA makes an exception for retrofilled "mineral oil PCB transformers." EPA defines a mineral oil PCB transformer as any transformer that was originally designed to contain mineral oil dielectric fluid and which has been tested and found to contain 500 ppm or greater PCB. Retrofilled mineral oil PCB transformers may be installed for reclassification purposes indefinitely after 1 Oct 1990.

2. Radial PCB transformers in or near commercial buildings must, by 1 Oct 1990, be equipped with electrical protection against transformer ruptures caused by both high current faults and sustained low current faults.

Encl (3)

3. Higher secondary voltage network PCB transformers in or near commercial buildings must, by 1 Oct 1990, be removed or reclassified to PCB-contaminated or non-PCB status. (This is a requirement of the July 1985 PCB fire rule amendments and was not changed by the July 1988 amendments.)

4. Lower secondary voltage network PCB transformers in or near commercial buildings, but not in sidewalk vaults must meet one of the following two requirements:

a. By 1 Oct 1990 must be equipped with electrical protection against transformer ruptures caused by high current faults, or

b. By 1 Oct 1993 must be removed from service.

As of 1 Oct 1990, if the owner has not provided electrical protection for the transformers in this category, he must register them in writing with the EPA Regional Administrator. 40 CFR 761.30 (a)(1)(iv)(C) specifies information to be provided.

5. Lower secondary voltage network PCB transformers in sidewalk vaults near commercial buildings must be removed from service by 1 Oct 1993.

6. Mineral oil transfomers: If the owner assumed that a mineral oil transformer contained less than 500 ppm PCB (as allowed by the regulations), then tested the transformer and found that it contained 500 ppm or more PCB, the transformer then becomes subject to all requirements for PCB transformers given in 40 CFR 761. 40 CFR 761.30 (a)(1)(xv)(A) through (J) provides a schedule of compliance efforts needed for such transformers.

7. Alternate marks for PCB transformer locations (vault doors, machinery room doors, fences, hallways, etc) are allowed if a program using these marks was initiated prior to 15 Aug 1985 and if other specific requirements are met. 40 CFR 761.40 (j) provides these requirements.

Note: Per reference (a), for Navy purposes "in or near commercial buildings" means within the interior of, on the roof of, attached to the exterior wall of, in an adjacent parking area serving, or within 30 meters of a non-industrial non-substation building. Commercial buildings include: (1) civilian or Navy personnel assembly buildings, (2) educational properties, (3) institutional properties (including museums, hospitals, clinics), (4) residential properties (living quarters), (5) stores, (6) office buildings (including administrative buildings), and (7) transportation centers (including airport terminal buildings, subway stations, bus stations, or train stations).

Doc No: CLEJ-00549-12.02-09/13/88

MAJOR PROVISIONS OF FINAL RULE AMENDING 40 CFR 761, POLYCHLORINATED BIPHENYLS; EXCLUSIONS, EXEMPTIONS AND USE AUTHORIZATIONS, FEDERAL REGISTER OF 27 JUNE 1988

Reference: (a) Fonecon btwn Barbara Sparks (NAVFAC 181A) and Art Johnston (NEHC 00D) of 8 Sept 1988

1. Materials contaminated from spills from an item containing 50 or more ppm PCB: These materials (including equipment and structures) may be used and distributed in commerce provided they are decontaminated in accordance with applicable EPA spill cleanup policies.

2. Used oil to be marketed and burned for energy recovery: The rule establishes restrictions and recordkeeping requirements for marketers and burners if the used oil contains any quantifiable level (that is, 2 ppm or greater) of PCBs. Used oil is presumed to contain quantifiable levels of PCB unless the marketer obtains analyses or other evidence that the used fuel oil does not contain quantifiable levels of PCBs.

3. Workers servicing heat transfer and hydraulic systems containing PCBs: EPA removed the regulatory requirement that owners of the systems provide, and workers wear, Viton elastomer gloves when performing maintenance work on heat transfer systems and hydraulic systems containing PCBs. Note that, per reference (a), protective gloves should still be worn for this work. The Navy Environmental Health Center (NEHC) recommends Nitrile gloves. If conditions require greater manual dexterity than can be achieved with Nitrile gloves, Viton elastomer gloves may still be worn. However, they are more expensive than Nitrile gloves.

Federal Register

Tuesday
July 19, 1988

Doc NO: CLEJ -
00549 - 12.02 -
09/13/88

Part VI

Environmental Protection Agency

40 CFR Part 761

Polychlorinated Biphenyls In Electrical Transformers; Final Rule

Enclosure (3)

GOVERNMENT EXPENSE
REPRODUCED AT

ENVIRONMENTAL PROTECTION AGENCY

FR Part 761

[OPTS-62035G; FRL 3366-6]

Polychlorinated Biphenyls in Electrical Transformers

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA issued a proposed rule, published in the Federal Register of August 21, 1987 (52 FR 31738) which proposed amendments to the rules governing the use of polychlorinated biphenyls (PCBs) in transformers. Among other things, this document finalizes those amendments which are related to the installation of PCB Transformers for emergency or reclassification situations and, with modification, the use of an alternative label on PCB Transformer locations. It also modifies some existing enhanced electrical protection requirements on lower secondary voltage network transformers, and sets guidelines for bringing PCB Transformers previously assumed to be PCB-contaminated transformers into compliance with all applicable regulations. This document reflects changes made in response to comments on the proposed rule.

DATE: In accordance with 40 CFR 23.5 (50 FR 7271), this rule shall be promulgated for purposes of judicial review at 1 p.m. Eastern Daylight Time on August 2, 1988. These amendments shall be effective September 1, 1988.

FOR FURTHER INFORMATION CONTACT: Michael M. Stahl, Acting Director, TSCA Assistance Office (TS-799), Office of Toxic Substances, Environmental Protection Agency, Rm. EB-44, 401 M Street SW., Washington, DC 20460, (202-554-1404), TDD-(202-554-0551).

SUPPLEMENTARY INFORMATION: Section 6(e) of the Toxic Substances Control Act (TSCA) generally prohibits the use of PCBs after January 1, 1978. The statute does, however, set forth two exceptions under which EPA may, by rule, allow a particular use of PCBs to continue. Under section 6(e)(2) of TSCA, EPA may allow PCBs to be used in a totally enclosed manner. TSCA also allows EPA to authorize the use of PCBs in a manner other than a totally enclosed manner if the Agency finds that the use "will not present an unreasonable risk of injury to health or the environment."

Public reporting burden for this collection of information is estimated to average 188 minutes per response, including time for reviewing instructions, searching for existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

I. Background

EPA promulgated a rule, which was published in the Federal Register of May 31, 1979 (44 FR 31514), to implement section 6(e) (2) and (3) of TSCA under 40 CFR Part 761. The rule, among other things, designated all intact, nonleaking capacitors, electromagnets, and transformers, other than railroad transformers, as "totally enclosed," thus permitting their use without specific authorizations or conditions. The Environmental Defense Fund (EDF) petitioned the U.S. Court of Appeals for the District of Columbia Circuit to review a number of provisions of the rule, including the portion of the rule that designated all intact and nonleaking capacitors, electromagnets, and transformers as "totally enclosed" (*Environmental Defense Fund, Inc. v. Environmental Protection Agency*, 636 F.2d 1267).

On October 30, 1980, the court, among other things, decided that there was insufficient evidence in the record to support the Agency's classification of transformers, capacitors, and electromagnets as totally enclosed. The court invalidated this portion of the rule and remanded the rule to EPA for further action.

As a consequence of the October 1980 decision, EPA undertook a number of rulemaking actions. One such rule was published in the Federal Register of August 25, 1982 (47 FR 37342) (hereafter, "PCB Electrical Use Rule"). This rule authorized, among other things, the continued use, until October 1, 1985, of PCB Transformers (electrical transformers containing greater than 500 ppm PCBs) in facilities involved in the handling of food or feed items, and authorized for the remainder of their useful life, the use of all other categories of non-railroad electrical transformers containing or contaminated with PCBs. In the PCB Electrical Use Rule, EPA made a determination that authorizing the use of these transformers for the remainder of their useful life (subject to certain conditions) did not present an unreasonable risk to public health or the environment. EPA's August 1982 decision to allow the continued use of electrical transformers containing PCBs was based on the reported low frequency of leaks and spills of PCBs from this equipment compared to the high costs associated with replacing this equipment with substitute transformers or requiring secondary containment to limit the spread of spilled materials. EPA determined that the most cost-effective means for reducing the risks posed by leaks and spills of PCBs from these transformers was to require routine inspections, repairs, and cleanup.

After promulgation of the PCB Electrical Use Rule, additional information came to EPA's attention which indicated that fires involving transformers that contain PCBs may occur more frequently than previously expected. Thus, EPA subsequently undertook an evaluation of the fire-related risks posed by the continued use of transformers that contain PCBs, and the costs and benefits of measures designed to reduce those risks. EPA issued a proposed rule, published in the Federal Register of October 11, 1984 (49 FR 39966), which contained EPA's determination that PCB Transformer fires (fires involving transformers containing greater than 500 parts per million (ppm) PCBs), particularly those fires which occur in or near commerical buildings, do present risks to human health and the environment. EPA reached this determination after considering the toxicity of materials which can be formed and released during fires involving this equipment, as well as the potential for human and environmental exposures to these materials from a single incident, and the expected frequency of incidents over the remaining useful life of this equipment.

The Agency issued a final rule, published in the Federal Register of July 17, 1985 (50 FR 29170) (hereafter, the "PCB Transformer Fires Rule") that amended the PCB Electrical Use Rule. The PCB Transformer Fires Rule placed additional restrictions and conditions on the use of PCB Transformers, particularly PCB Transformers located in or near commerical buildings. Among other provisions, EPA banned the further installation of PCB Transformers in or near commercial buildings, required the removal of PCB Transformers that posed particularly high fire-related risks, and required the installation of enhanced electrical protection on all other PCB Transformers located in or near commerical buildings.

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After the promulgation of the PCB Transformer Fires Rule, Mississippi Power Company (hereafter, "Mississippi Power") filed a petition for review of the rule. In the context of settlement negotiations, EPA agreed to issue, for publication in the Federal Register, a notice of interpretation and to propose to amend portions of the PCB Transformer Fires Rule.

EPA issued a Notice of Interpretation of the PCB Transformer Fires Rule, published in the Federal Register of December 31, 1986 (51 FR 47241), that clarified several provisions of the regulations governing the use of electrical transformers containing PCBs. The questions concerned: (1) The PCB Transformer registration requirements; (2) the requirement for the removal of stored combustibles near PCB Transformers; (3) the requirement for the reporting of fire-related incidents to the National Response Center; (4) the definition of commercial building; (5) the status of mineral oil transformers which are found to contain over 500 ppm PCBs; (6) the ban on the installation of PCB Transformers in or near commercial buildings; and (7) the requirement for the labeling of the exterior of PCB Transformer locations.

Mississippi Power also raised additional, more substantive issues regarding EPA's ban on the installation of PCB Transformers, the requirements for enhanced electrical protection of lower secondary voltage network PCB Transformers, and the requirement for the labeling of the exterior of PCB Transformer locations. First, Mississippi Power questioned whether EPA had intended to ban the installation of PCB Transformers in emergency situations (where no other non-PCB substitute is available) and the installation of retrofilled PCB Transformers when installed for purposes of reclassification. Further, Mississippi Power asked EPA to reconsider the requirement for enhanced electrical protection of lower secondary voltage network PCB Transformers because of space constraints in sidewalk vaults, lack of suitable (i.e., waterproof) fuse enclosures, and Mississippi Power's belief that the cost of fuse installation is two to four times higher than EPA originally estimated. Finally, Mississippi Power asked that EPA allow the use of alternative labels on PCB Transformer locations, when such labeling occurred voluntarily prior to the effective date of the PCB Transformer Fires Rule.

EPA evaluated the additional information submitted by Mississippi Power in the context of settlement negotiations and decided that the new information warranted a reconsideration of certain of the Agency's previous determinations. This rule presents the results of the Agency's further evaluations and finalizes, with some modification, the proposed amendments to the requirements of the PCB Transformer Fires Rule.

EPA received 15 comments on the proposed rule, four of which were received after the close of the comment period, October 5, 1987. There were no requests for an informal hearing.

EPA has considered all the comments received in response to the proposed rule (as well as comments received after the close of the comment period) and has modified the final rule where appropriate. Some comments either did not address issues in the proposed amendments, misinterpreted a proposed requirement, or, in one case, raised an interpretive issue, outside the scope of this rule, that cannot be immediately resolved. This issue concerns enhanced electrical protection on radial and low secondary voltage network PCB Transformers. EPA considers the issue outside the scope of the rule because the rule addresses only issues agreed upon in the Settlement Agreement.

In order to reduce the fire-related risks posed by the use of PCB Transformers, the July 1985 Transformer Fires Rule required, among other things, enhanced electrical protection on all radial PCB Transformers and low secondary voltage network PCB Transformers in use in or near commercial buildings by October 1, 1990. The rule called for current-limiting fuses or other equivalent technology which detect high current faults and provide for complete deenergization of the transformer within certain time limitations before transformer rupture occurred. The August 1987 proposed amendment retained that requirement, but offered, as an option to this protection, transformer removal by October 1, 1993.

The interpretive issue raised by two comments suggests that complete deenergization of a faulted transformer is not necessary to achieve the Agency's goal, i.e., to prevent PCB Transformer rupture from a fire-related incident. The argument is that since most PCB Transformers are three-phased with a current-limiting fuse on each phase, and that since most faults are internal faults and limited to one phase, deenergization of the specific faulted phase would achieve the required level of protection against rupture. Thus, these comments maintain that it is not necessary to deenergize the entire transformer.

EPA does not currently have sufficient information to be certain whether partial deenergization (i.e., of the faulted phase) would suffice in all situations. That is, EPA is not able at this time to state that deenergization of the faulted phase is equivalent (in terms of protection against rupture) to total deenergization of the transformer. EPA suggests that the commentors provide supplementary information so that EPA may resolve this interpretive issue. If EPA finds that deenergization of the faulted phase is equivalent to complete deenergization, EPA will issue an interpretive notice stating so. In the meantime, EPA requires enhanced electrical protection to achieve complete deenergization of a faulted transformer as stated in the July 1985 final rule. EPA has prepared a support document for this rulemaking that responds to those comments that did not result in modification of the rule. This document entitled "Response to Comments on the Proposed Amendment to the PCB Transformer Fires Proposed Rule, June 1988," is in the public record and is available for review and copying from 8 a.m. to 4 p.m. Monday through Friday, except legal holidays, in Rm. NE-G004, 401 M Street SW., Washington, DC 20460.

For a more detailed discussion of all the issues involved in this rulemaking, see the proposed rule, published at 52 FR 31738, August 21, 1987.

II. Summary Of The Final Rule

Under section 6(e)(2)(B) of TSCA, EPA can authorize a use of PCBs provided that the use "will not present an unreasonable risk of injury to health or the environment." EPA had determined that the use of PCB Transformers until October 1, 1985 in facilities involved in the handling of food and feed items and the use of all other categories of non-railroad electrical transformers containing or contaminated with PCBs for the remainder of their useful lives would not present an unreasonable risk of injury to health or the environment. However, EPA later determined that PCB Transformer fires (fires involving transformers containing greater than 500 ppm PCB), particularly fires which occur in or near commercial buildings, do pose risks to humans and the environment. EPA determined that the continued use of PCB Transformers without additional regulatory control measures would present an unreasonable risk of injury to health and the environment and thus, in the PCB Transformer Fires Rule, imposed further restrictions and conditions on the use of PCB Transformers.

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The PCB Transformer Fires Rule required the marking of the exterior of PCB Transformer locations with the PCB identification label, and prohibited, among other things, the further installation of PCB Transformers (electrical transformers containing 500 ppm or greater PCBs) in or near commercial buildings. The PCB Transformer Fires Rule also placed conditions on the continued use of lower secondary voltage network PCB Transformers in or near commercial buildings by requiring that these transformers be equipped with enhanced electrical protection as of October 1, 1990. Enhanced electrical protection was required by EPA to avoid electrical failures leading to fire-related incidents.

Following promulgation of the PCB Transformer Fires Rule, Mississippi Power filed suit against EPA. In comments submitted in the context of settlement discussion, Mississippi Power asked EPA to consider: (1) Clarifying the current language of the requirements for enhanced electrical protection by substituting the word "rupture" for "failure"; (2) modifying the requirement for enhanced electrical protection of lower secondary voltage network transformers because of space constraints in existing sidewalk vault locations; (3) allowing the installation of PCB Transformers in certain circumstances, such as in emergency situations and for purposes of reclassification; (4) allowing the use of alternative labels in situations where such labeling was voluntarily initiated prior to the effective date of the PCB Transformer Fires Rule; and (5) establishing a specific schedule for bringing mineral oil transformers, which are tested and found to contain 500 ppm or greater PCBs, into compliance with applicable requirements.

After reviewing the new information submitted by Mississippi Power and others, and considering their requests for amendments to the PCB Transformer Fires Rule, EPA determined that the issues raised by Mississippi Power and others warranted further Agency consideration and, therefore, proposed certain amendments to the PCB Transformer Fires Rule. In this document, EPA is amending the regulations that ban the further installation of PCB Transformers in or near commercial buildings and impose certain requirements for enhanced electrical protection, as of October 1, 1990, on lower secondary voltage network PCB Transformers.

EPA is also amending the regulations to allow: (a) The installation of PCB Transformers in emergency situations (when no other non-PCB substitute is available); (b) the installation of retrofilled PCB Transformers for purposes of reclassification; and (c) the use of an alternative label to mark the exterior of certain PCB Transformer locations provided the labeling program meets certain specific requirements. The amendment will also offer owners of lower secondary voltage network PCB Transformers located in or near commercial buildings the option of enhanced electrical protection by October 1, 1990 (as is currently required), or removal by October 1, 1993. Further, EPA is prohibiting the use of lower secondary voltage network PCB Transformers located in sidewalk vaults near commercial buildings as of October 1, 1993.

In the proposed rule, EPA used the term "to register" in connection with notifying fire personnel where PCB Transformers were located. This term was used because legally it means "to record formally and exactly." EPA's enforcement experience with 40 CFR 761.30(a)(1)(vi), however, has demonstrated that some persons have misinterpreted "to register" to allow informal, nonwritten actions in place of a formal written record. To avoid misinterpretation, EPA has made it clear that it interprets this term to mean to inform or notify in writing.

Finally, EPA is amending 40 CFR 761.30(a)(1) (iv) and (v), by deleting the words "failure" and "failures" and substituting the words "rupture" and "ruptures" to avoid ambiguity in the language, and is requiring a specific schedule for bringing mineral oil transformers, found to contain 500 ppm or greater PCBs, into compliance with the applicable regulations.

III. Discussion Of The Final Rule

A. Installation Of PCB Transformers

The PCB Transformer Fires Rule banned the installation of PCB Transformers in or near commercial buildings after October 1, 1985. In the August 21, 1987 proposed rule, EPA proposed to allow the installation of PCB Transformers in or near commercial buildings in two situations that EPA believes warrant special consideration. The first is in emergency situations, where neither a non-PCB Transformer nor PCB-Contaminated transformer is currently available to replace a failed PCB Transformer, and immediate replacement is necessary to continue electrical service to the entity or entities served by the transformer. The second is for purposes of reclassification, so that a retrofilled transformer may accrue the necessary in-service use time to allow reclassification of the unit. As discussed in the proposed rule (52 FR 31742), EPA believes installation of PCB Transformers for these two uses, under the conditions specified, will not present an unreasonable risk to human health or the environment. These provisions, as modified, are in § 761.30(a)(1)(iii) of the final rule.

In order to ensure consistent treatment to those owners who installed PCB Transformers in emergency situations or for reclassification purposes between October 1, 1985 and September 1, 1988, EPA has added § 761.30(a)(1)(iii)(D) to the final rule. Those owners must notify the appropriate Regional Administrator of such installations within 30 days after the effective date of the rule.

1. *Emergency installation.* In the proposed rule, EPA solicited comments on the availability of non-PCB Transformers for use in emergency situations and the ability of power companies to purchase and receive non-PCB Transformers quickly for use in emergency situations. This information was requested since various electric power companies had indicated replacement non-PCB Transformers were not readily available. EPA received a comment confirming their non-availability; therefore, EPA assumes that non-PCB Transformers or PCB-Contaminated transformers are typically neither readily available for installation nor can they be quickly acquired. The final rule retains the proposed provisions on installation of PCB Transformers in emergency and reclassification situations in § 761.30(a)(1)(iii)(A).

The proposed rule required documentation to support an "Emergency Situation" in accordance with the definition in § 761.3. There was no comment on maintaining documentation. For compliance monitoring purposes, EPA is adding to the final rule the requirement that documentation be completed 30 days after installation and be maintained at the owner's facility. The documentation required to show an "Emergency Situation" is set forth in the final rule in § 761.30(a)(1)(iii)(B)(*1*) (*i*) through (*vi*).

EPA received a comment on the proposed amendment as to whether a PCB Transformer installed in an emergency situation could then be subsequently reclassified to non-PCB or PCB-Contaminated transformer status. EPA's response is that a transformer, originally installed in an emergency situation, can be subsequently reclassified if the reclassification to non-

PCB or PCB-Contaminated status is completed within the 1 year allowed for a transformer originally installed in an emergency situation or by October 1, 1990, whichever is earlier. If the transformer cannot be reclassified in 1 year or by October 1, 1990, whichever is earlier, the transformer must be removed from service since it was originally installed in an "Emergency Situation" as defined in § 761.3. In the final rule, this requirement is in § 761.30(a)(1)(iii)(B)(*3*).

2. *Installation for reclassification purposes.* Although the current regulation prohibits the replacement of a failed PCB Transformer with another PCB Transformer in or near a commercial building, EPA believes that retrofilling and reclassification should be available as a viable option for this equipment. EPA has typically encouraged retrofilling and reclassification and believes that the benefits of reclassification in certain situations approach the benefits of PCB Transformer replacement.

Thus, EPA reconsidered its determination to ban further installation of PCB Transformers as of October 1, 1985 and proposed extending the effective date to allow the installation until October 1, 1990 of retrofilled PCB Transformers so that these units may accrue the necessary in-service use time to allow for reclassification. The final rule requires documentation of the installation of PCB Transformers for reclassification purposes to be maintained on the owner's premises in § 761.30(a)(1)(iii)(C)(*1*) (*i*) through (*iv*).

EPA solicited comments on the time needed to achieve reclassification. EPA received comments that reclassification to a non-PCB or PCB-Contaminated transformer can take as long as 3 years. However, EPA believes that 18 months provide sufficient time to reclassify a retrofilled PCB Transformer to a non-PCB or, at least, a PCB-Contaminated status and added that time period to the final rule in § 761.30(a)(1)(iii)(C)(*2*). EPA believes that the benefits of allowing the use of a PCB Transformer for this very limited time outweigh the potential risks involved. Allowing a retrofilled PCB Transformer to be placed in service for reclassification purposes encourages owners of PCB Transformers to reclassify these units and is consistent with the intent of the rule, which is to phase out gradually the use of PCB Transformers.

Thus, EPA is allowing the installation of retrofilled PCB Transformers until October 1, 1990; however, their in-service time is limited to 18 months after installation or until October 1, 1990, whichever is earlier, to achieve reclassification to a non-PCB or PCB-Contaminated status. Therefore, for practical purposes, a PCB Transformer would have to be installed for reclassification purposes with enough time allowed for it to reach at least the PCB-Contaminated status by October 1, 1990.

EPA has also decided to allow this requirement to apply retroactively to October 1, 1985, for installation of PCB Transformers for emergency and reclassification purposes which has already taken place. Therefore, EPA has provided for these situations in § 761.30(a)(1)(iii)(D) of the final rule. However, those owners who installed PCB Transformers between October 1, 1985, and September 1, 1988, must provide the Regional Administrator, within 30 days after the effective date of this rule, a notice in writing that the PCB Transformer was installed for reclassification purposes. Information to be provided for compliance monitoring purposes includes (1) The date of installation; (2) the type of transformer installed; (3) the PCB concentration, if known, at the time of installation; and (4) the reclassification schedule. These requirements were added in the final rule under § 761.30(a)(1)(iii)(D).

EPA recognizes that there are differences between the installation for reclassification purposes of a retrofilled mineral oil PCB transformer and an "askarel" PCB Transformer. Since installation of a retrofilled mineral oil PCB transformer would not present an unreasonable risk, EPA proposed that a retrofilled mineral oil PCB transformer could be installed indefinitely after October 1, 1990 for reclassification purposes. Its reclassification to a PCB-Contaminated transformer or a non-PCB transformer status would then be determined by testing its PCB concentration 3 months after its installation for reclassification. There were no comments on this proposal and the provisions are retained in § 761.30(a)(1) (iii)(C)(*2*)(*ii*) and (iii)(C)(*2*)(*iii*) of the final rule.

B. Failure vs. Rupture

EPA proposed amending the language in § 761.30(a)(1) (iv), (iv)(A), and (v), by deleting the words "failure" and "failures", and substituting the words "rupture" and "ruptures". The preamble explained the need for this change was to avoid ambiguity; the final rule includes the amendment.

C. Alternative Labeling

EPA proposed to allow the use of an alternative label (other than that required under the current regulation) for marking PCB Transformer locations—vault doors, machinery room doors, fences, hallways, or means of access, other than grates, and manhole covers. While EPA is interested in a consistent nationwide labeling system, EPA believes that those who voluntarily initiated labeling programs after consultation with local emergency response organizations should not be required to incur the additional expense associated with relabeling. There were no comments on this issue; however, internal EPA review and reevaluation resulted in some minor modifications to the proposal. When EPA proposed to allow the use of alternative marks, the Agency intended to limit this use to situations where a company can demonstrate that a local fire department knows and recognizes the alternative. For purposes of clarity for this rule, EPA intends that recognizing an alternative mark means to be able to identify it and know its meaning. Implicit in recognizing the use of the mark is the necessity that the local fire department has accepted the use of the mark, i.e., taken steps to make personnel aware of the mark by incorporating it into a formal or informal program used to make essential information available to fire department personnel. Thus, EPA is modifying the final rule to require that the company show specifically that the local fire department accepted the use of the mark by incorporating it into its training program. The use of the term "accept" in the final rule does not require any showing that the fire department has approved the mark, only that it has incorporated the use of the mark into its response procedures and training.

Alternative labeling, including the notification provisions, is retained in the final rule in § 761.40. Implicit in the proposed notification to the Regional Administrator was the authority to reject the alternative labeling if it is not substantiated as required. The final rule makes this authority explicit in § 761.40(j)(2)(iv). Also, to facilitate compliance monitoring and enforcement, the final rule requires documentation from the fire department with primary jurisdiction indicating the unit is aware of the alternative mark, accepts its use, and has incorporated it into its training materials. The final rule does require the Regional Administrator either to approve or disapprove in writing the use of an alternative label within 30 days of receipt of the documentation of a program.

D. Electrical Protection

EPA proposed to amend the electrical protection requirements on lower

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secondary voltage network PCB Transformers. For lower secondary voltage network PCB Transformers located in sidewalk vaults near commercial buildings, EPA proposed requiring the removal of these tranformers by October 1, 1993. (See discussion in Unit III.E. below.) For all other lower secondary voltage network PCB Transformers in or near commercial buildings, the proposed rule offered owners an option to the current requirement for enhanced electrical protection by October 1, 1990. This option is the removal of this equipment by October 1, 1993, provided that EPA is notified of the pending removal by no later than October 1, 1990. In short, EPA proposed to give owners of lower secondary voltage network PCB Transformers located in or near commercial buildings (in other than sidewalk vault locations) the option of implementing risk reduction measures on a shorter schedule, by complying with the current requirement to install enhanced electrical protection by October 1, 1990, or by removing the PCB Transformers by October 1, 1993. As discussed in the proposed rule (52 FR 31743), EPA believes that neither of these options will present an unreasonable risk to human health or the environment. EPA also proposed to require those owners who choose to remove this equipment by October 1, 1993, to register in writing those transformers with the EPA Regional Administrator in the appropriate region by October 1, 1990. This would provide the Regional Administrator with the information needed to facilitate compliance monitoring efforts. There were no comments on this provision and the final rule incorporates it in § 761.30(a)(1)(iv)(C).

E. Phaseout of Lower Secondary Voltage Network PCB Transformers in Sidewalk Vaults

Under the current PCB regulations, as of October 1, 1990, EPA prohibits the use of all network PCB Transformers with higher secondary voltages, while requiring enhanced electrical protection on the remaining commercial PCB Transformers, including all radial and lower secondary voltage network PCB Transformer.

EPA proposed requiring that owners of lower secondary voltage network PCB Transformers located in sidewalk vaults near commercial buildings remove those transformers from service by October 1, 1993. In the proposed rule, EPA did not give those owners the option available to owners of lower secondary voltage network PCB Transformers located in a sidewalk vault, either to remove these tranformers from service or to install enhanced electrical protection.

While EPA recognizes that allowing the use of this equipment until October 1, 1993 (an additional 3 years), without installing enhanced electrical protection poses some risk, EPA believes that phaseout of an additional class of tranformers above those currently required to be phased out, further minimizes the risk of fire-related events involving PCB Transformers. EPA continues to prefer the regulatory option of transformer removal because it completely eliminates PCB Transformer fire-related risk, as well as the risks posed by leaks and spills of PCBs from these transformers. Thus, although there is some risk in allowing additional time to phase out this equipment, EPA believes the benefits of removing these PCB-containing transformers from service, thus eliminating any potential risk of PCB exposure, outweighs the risks incurred by allowing the use of these tranformers for an additional 3 years. Further, EPA has determined that requiring phaseout of those tranformers in sidewalk vaults would be practical since owners of this equipment express an interest in removing rather than installing enhanced electrical protection and EPA has already determined that for this type of equipment some risk reduction measure must be implemented.

There was no comment on the proposed amendment of the date for removal of these tranformers and the provision remains in the final rule in § 761.30(a)(1)(iv)(B).

F. Discovery of a PCB Transformer

EPA proposed that in the event a mineral oil transformer, assumed to contain less than 500 ppm of PCBs under § 761.3, is determined through testing to be contaminated at 500 ppm or greater, efforts must be initiated immediately to bring the transformer into compliance in accordance with Part 761. The proposed rule contained a schedule for achieving such compliance and solicited comments on the time frames.

Two comments asked for a clarification regarding compliance with the recordkeeping and reporting requirements, specifically, whether records and reports had to be developed for the transformer while it was assumed to be below 500 ppm. It is not EPA's intention to require owners to develop records retroactively relating to the newly discovered PCB Transformer. EPA is requiring that, after discovering that a mineral oil transformer is a PCB Transformer (and transformer that contains 500 ppm PCB or greater), the owner of the transformer comply with the schedule for bringing the transformer into compliance.

Comments indicated that anywhere from 2 to 15 days would allow ample time to purchase and affix labels to transformers, vault doors, machinery room doors, fences, hallways or other means of access to the PCB Transformer. Therefore, EPA is implementing in the final rule a 7-day period to mark the newly discovered PCB Transformer and transformer locations with the appropriate label, in § 761.30(a)(1)(xv) (B) and (C).

Comments received on the proposed rule agreed with EPA that 30 days was a reasonable amount of time to complete the written registration of the newly discovered PCB Transformer with appropriate fire response personnel and building owners. Therefore, in § 761.3)(a)(1)(xv)(D) the final rule allows 30 days after the transformer is tested and found to contain greater than 500 ppm PCBs to register the transformer.

No other comments were received on the proposed schedule, and the final rule incorporates the other provisions as proposed.

G. Other Changes

Three other minor changes were made to the proposed rule for the purpose of clarification. The first is the addition of the definition of "Retrofill" to § 761.3 to make clear that it means the draining and refilling of a transformer. The second is in paragraph (2) of the definition "Emergency Situation" under § 761.3 which has been changed to indicate that immediate replacement must be necessary for continued service to "power users" rather than "utility customers." The third is in § 761.40(j)(3) where paragraph (j)(1) is referenced to indicate clearly the locations where the marking labels must be placed.

Finally, one comment indicated there could be confusion where phase-out of a PCB Transformer is required and reclassification has been achieved. EPA agrees that a PCB Transformer that has been retrofilled and reclassified to PCB-Contaminated or non-PCB status in accordance with the TSCA regulations meets the requirement for phase-out of a PCB Transformer.

IV. The Record For This Rule

A. Previous Rulemaking Record

(1) Official rulemaking record from "Polychlorinated Biphenyls in Electrical Transformers" Final Rule, published in the Federal Register of July 17, 1985 (50 FR 29170).

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(2) Official Record from "Notice of Interpretation of Transformer Fires Regulations," published in the Federal Register of December 31, 1986 (51 FR 47241).

(3) Official Record from "Polychlorinated Biphenyls in Electrical Transformers" Proposed Rule, published in the Federal Register of August 21, 1987 (52 FR 31738). FR 31736).

B. Support Documents

(4) USEPA, OPTS, EED, Putnam, Hayes and Bartlett, Inc. "Evaluation of the Sufficiency of Current and Projected PCB Disposal Capacity To Meet Demand Requirements," July 1986.

(5) USEPA, EED, "Response to Comments on the Proposed Amendment to the PCB Transformer Fires, Rule," June 1988.

(6) Letters received from:

a. Kansas City Power and Light dated September 11, 1985.

b. Electric Power Board of Chattanooga dated October 3, 1985.

c. UNISON Transformer Services, Inc. dated March 24, 1988.

(7) Correspondence between EPA and the National Bureau of Standards:

a. Letter to Richard W. Bukowski, Center for Fire Research, Fire Science and Engineering Division, National Bureau of Standards, Gaithersburg, Maryland, dated March 29, 1988.

b. Response from Richard W. Bukowski, dated April 18, 1988.

(8) Reports from Resource Planning Corporation submitted to Utility Solid Waste Activities Group, dated January 6, and 8, and April 23, 1986.

(9) Telephone communications between:

a. Joseph Arcoleo of Jersey Central Power and Light Company and Thomas Simons, Office of Toxic Substances, EPA, on November 18, 1987, on the time between installation for reclassification of a PCB Transformer and actual retrofilling.

b. Joseph Willoughby of the General Services Administration and Thomas Simons, Office of Toxic Substances, EPA, on December 15, 1987, on deenergization of PCB Transformers through the use of current-limiting fuses.

10. Communication between Chicago Fire Department and Commonwealth Edison Co.:

a. Letter to H.A. Onishi, Commonwealth Edison Co., from John M. Eversole, Chicago Fire Department, dated February 14, 1984.

b. Letter to Louis T. Galante, Chicago Fire Department, from H.A. Onishi, Commonwealth Edison Co., dated September 23, 1985.

c. Letter to H.A. Onishi, Commonwealth Edison Co., from Thomas D. Roche, Chicago Fire Department.

V. Regulatory Requirements

A. Executive Order 12291

Under Executive Order 12291, issued February 17, 1981, EPA must judge whether a rule is a "major rule" and, therefore, subject to the requirement that a regulatory impact analysis be prepared. EPA has determined that this amendment to the PCB Rule is not a "major rule" as that term is defined in section 1(b) of the Executive Order and therefore is not subject to the requirement that a regulatory impact analysis be prepared.

While the rule places some additional restrictions and conditions on the use of PCB Transformers, it is worth noting that this rule allows the continued use of PCBs in electrical transformers that would otherwise be prohibited by section 6(e) of TSCA. This rule avoids the severe disruption of electric service to the public and industry that would occur if the use of this equipment were immediately prohibited. It also avoids the economic impact that would result from a requirement to replace the equipment as soon as possible.

This rule was submitted to OMB as required by Executive Order 12291. There were no comments from OMB on the rule.

B. Regulatory Flexibility Act

Under section 605(b) of the Regulatory Flexibility Act, 5 U.S.C. 605(b), the Administrator may certify that a rule will not, if promulgated, have a significant impact on a substantial number of small entities and, therefore, does not require a regulatory flexibility analysis.

In general this rule reduces the burden on small businesses that would otherwise be encountered if an immediate ban on PCB-containing transformers were to take effect. If an immediate ban on the use of PCBs in transformers were imposed, large costs would be incurred by all producers and users of electricity, including small businesses.

EPA certifies that this rule will not have a significant economic impact on a substantial number of small entities.

C. Paperwork Reduction Act

The Paperwork Reduction Act of 1980 (PRA), 44 U.S.C. 3501 et seq., authorizes the Director of OMB to review certain information collection requests by Federal agencies. EPA has determined that the recordkeeping and reporting requirements of this final rule constitute a "collection of information" as defined in 44 U.S.C. 3502(4). The provisions of 40 CFR 761.30 authorize the continued use of electrical equipment under certain circumstances which require recordkeeping and reporting. EPA has clearance to collect information for this authorization under OMB control numbers 2070–0003 and 2070–0073. Under the normal OMB information collection review cycle, 2070–0003 and 2070–0073 are being consolidated, and the notification required in the options allowed under this amendment are included under the consolidated OMB control number 2070–0003 for the use authorization for PCB electrical equipment.

Public reporting burden for this collection of information is estimated to average 188 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Chief, Information Policy Branch, PM–223, U.S. Environmental Protection Agency, 401 M St., SW., Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, marked "Attention: Desk Officer for EPA."

List of Subjects in 40 CFR Part 761

Environmental protection, Hazardous substances, Labeling, Polychlorinated biphenyls, Reporting and recordkeeping requirements.

Dated: July 6, 1988.

Lee M. Thomas,

Administrator.

Therefore 40 CFR Part 761 is amended as follows:

1. The authority citation for Part 761 continues to read as follows:

PART 761—[AMENDED]

Authority: 15 U.S.C. 2605, 2607, 2611; Subpart G also issued under 15 U.S.C. 2614 and 2616.

2. In § 761.3 by adding the definitions of "emergency situation", "mineral oil PCB Transformer", "non-PCB Transformer", and "retrofill" alphabetically to read as follows:

§ 761.3 Definitions.

* * * * *

"Emergency Situation" for continuing use of a PCB Transformer exists when:

(1) Neither a non-PCB Transformer nor a PCB-Contaminated transformer is

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currently in storage for reuse or readily available (i.e., available within 24 hours) for installation.

(2) Immediate replacement is necessary to continue service to power users.

• • • • •

"Mineral Oil PCB Transformer" means any transformer originally designed to contain mineral oil as the dielectric fluid and which has been tested and found to contain 500 ppm or greater PCBs.

• • • • •

"Non-PCB Transformer" means any transformer that contains less than 50 ppm PCB; except that any transformer that has been converted from a PCB Transformer or a PCB-Contaminated transformer cannot be classified as a non-PCB Transformer until reclassification has occurred, in accordance with the requirements of § 761.30(a)(2)(v).

• • • • •

"Retrofill" means to remove PCB or PCB-contaminated dielectric fluid and to replace it with either PCB, PCB-contaminated, or non-PCB dielectric fluid.

• • • • •

3. In § 761.30 by revising paragraphs (a)(1)(iii), (iv), and (v), by adding paragraph (a)(1)(xv), and by revising the OMB control number to read as follows:

§ 761.30 Authorizations.

• • • • •

(a) • • •

(1) • • •.

(iii) Except as otherwise provided, as of October 1, 1985, the installation of PCB Transformers, which have been placed into storage for reuse or which have been removed from another location, in or near commercial buildings is prohibited.

(A) The installation of PCB Transformers on or after October 1, 1985, however, and their use thereafter, is permitted either in an emergency situation, as defined in § 761.3, or in situations where the transformer has been retrofilled and is being placed into service in order to qualify for reclassification under paragraph (a)(2)(v) of this section.

(B) Installation of a PCB Transformer in an emergency situation is permitted when done in accordance with the following:

(*1*) Documentation to support the reason for the emergency installation of a PCB Transformer must be maintained at the owner's facility and completed within 30 days after installation of the PCB Transformer. The documentation must include, but is not limited to:

(*i*) The type of transformer, i.e., radial or lower or higher network, that requires replacement.

(*ii*) The type(s) of transformers, i.e., radial or lower or higher network, that must be used for replacement.

(*iii*) The date of transformer failure.

(*iv*) The date of subsequent replacement.

(*v*) The type of transformer, i.e., radial or lower or higher network, installed as a replacement.

(*vi*) A statement describing actions taken to locate a non-PCB or PCB-Contaminated transformer replacement.

(*2*) Such emergency installation is permitted until October 1, 1990, and the use of any PCB Transformer installed on such an emergency basis is permitted for 1 year from the date of installation or until October 1, 1990, whichever is earlier.

(*3*) PCB Transformers installed for emergency purposes may be subsequently reclassified; however, the transformer must be effectively reclassified to a non-PCB or PCB-Contaminated status within 1 year after installation or by October 1, 1990, whichever is earlier because the transformer was initially installed in an emergency situation.

(C) Installation of a retrofilled PCB Transformer for reclassification purposes is permitted when it is done in accordance with the following:

(*1*) Those who installed transformers for reclassification purposes must maintain on the owner's premises, completed within 30 days of installation, the following information:

(*i*) The date of installation.

(*ii*) The type of transformer, i.e., radial or lower or higher network, installed.

(*iii*) The PCB concentration, if known, at the time of installation.

(*iv*) The retrofill and reclassification schedule.

(*2*) For purposes of this paragraph, the installation of retrofilled PCB Transformers for purposes of reclassification under paragraph (a)(2)(v) of this section is permitted until October 1, 1990.

(*i*) However, the use of a retrofilled PCB Transformer installed for reclassification purposes is limited to 18 months after installation or until October 1, 1990, whichever is earlier.

(*ii*) Retrofilled mineral oil PCB Transformers may be installed for reclassification purposes indefinitely after October 1, 1990.

(*iii*) Once a retrofilled transformer has been installed for reclassification purposes, it must be tested 3 months after installation to ascertain the concentration of PCBs. If the PCB concentration is below 50 ppm, the transformer can be reclassified as a non-PCB Transformer. If the PCB concentration is between 50 and 500 ppm, the transformer can be reclassified as a PCB-Contaminated transformer. If the PCB concentration remains at 500 ppm or greater, the entire process must either be repeated until the transformer has been reclassified to a non-PCB or PCB-Contaminated transformer in accordance with paragraph (a)(2)(v) of this section or the transformer must be removed from service.

(D) Owners who installed PCB Transformers in emergency situations or for reclassification purposes between October 1, 1985 and September 1, 1988 must notify the Regional Administrator in writing by October 3, 1988 of such installation. The notification for emergency installation must include the information in paragraph (a)(1)(iii)(B)(*1*)(*i*) through (*vi*) of this section. The notification for reclassification must include the information in paragraph (a)(1)(iii)(C)(*1*)(*i*) through (*iv*) of this section. All PCB Transformers installed in an emergency situation or installed for reclassification purposes are subject to the requirements of this Part 761.

(iv) As of October 1, 1990, all radial PCB Transformers, in use in or near commercial buildings, and lower secondary voltage network PCB Transformers not located in sidewalk vaults in or near commercial buildings (network transformers with secondary voltages below 480 volts) that have not been removed from service as provided in paragraph (a)(1)(v) of this section, must be equipped with electrical protection to avoid transformer ruptures caused by high current faults.

(A) Current-limiting fuses or other equivalent technology must be used to detect sustained high current faults and provide for complete deenergization of the transformer (within several hundredths of a second in the case of radial PCB Transformers and within tenths of a second in the case of lower secondary voltage network PCB Transformers), before transformer rupture occurs. The installation, setting, and maintenance of current-limiting fuses or other equivalent technology to avoid PCB Transformer ruptures from sustained high current faults must be completed in accordance with good engineering practices.

(B) All lower secondary voltage network PCB Transformers not located in sidewalk vaults (network transformers with secondary voltages below 480 volts), in use in or near commercial buildings, which have not been protected as specified in paragraph

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(a)(1)(iv)(A) of this section by October 1, 1990, must be removed from service by October 1, 1993.

(C) As of October 1, 1990, owners of lower secondary voltage network PCB Transformers, in use in or near commercial buildings which have not been protected as specified in paragraph (a)(1)(iv)(A) of this section and which are not located in sidewalk vaults, must register in writing those transformers with the EPA Regional Administrator in the appropriate region. The information required to be provided in writing to the Regional Administrator includes:

(1) The specific location of the PCB Transformer(s).

(2) The address(es) of the building(s) and the physical location of the PCB Transformer(s) on the building site(s).

(3) The identification number(s) of the PCB Transformer(s).

(D) As of October 1, 1993, all lower secondary voltage network PCB Transformers located in sidewalk vaults (network transformers with secondary voltages below 480 volts) in use near commercial buildings must be removed from service.

(v) As of October 1, 1990, all radial PCB Transformers with higher secondary voltages (480 volts and above, including 480/277 volt systems) in use in or near commercial buildings must, in addition to the requirements of paragraph (a)(1)(iv)(A) of this section, be equipped with protection to avoid transformer ruptures caused by sustained low current faults.

* * * * *

(xv) In the event a mineral oil transformer, assumed to contain less than 500 ppm of PCBs as provided in § 761.3, is tested and found to be contaminated at 500 ppm or greater PCBs, it will be subject to all the requirements of this Part 761. In addition, efforts must be initiated immediately to bring the transformer into compliance in accordance with the following schedule:

(A) Report fire-related incidents, effective immediately after discovery.

(B) Mark the PCB transformer within 7 days after discovery.

(C) Mark the vault door, machinery room door, fence, hallway or other means of access to the PCB Transformer within 7 days after discovery.

(D) Register the PCB Transformer in writing with fire response personnel with primary jurisdiction and with the building owner, within 30 days of discovery.

(E) Install electrical protective equipment on a radial PCB Transformer and a non-sidewalk vault, lower secondary voltage network PCB Transformer in or near a commercial building within 18 months of discovery or by October 1, 1990, whichever is later.

(F) Remove a non-sidewalk vault, lower secondary voltage network PCB Transformer in or near a commercial building, if electrical protective equipment is not installed, within 18 months of discovery or by October 1, 1993, whichever is later.

(G) Remove a lower secondary voltage network PCB Transformer located in a sidewalk vault in or near a commercial building, within 18 months of discovery or by October 1, 1993, whichever is later.

(H) Retrofill and reclassify a radial PCB Transformer or a lower or higher secondary voltage network PCB Transformer, located in other than a sidewalk vault in or near a commercial building, within 18 months or by October 1, 1990, whichever is later. This is an option in lieu of installing electrical protective equipment on a radial or lower secondary voltage network PCB Transformer located in other than a sidewalk vault or of removing a higher secondary voltage network PCB Transformer or a lower secondary voltage network PCB Transformer, located in a sidewalk vault, from service.

(I) Retrofill and reclassify a lower secondary voltage network PCB Transformer, located in a sidewalk vault, in or near a commercial building within 18 months or by October 1, 1993, whichever is later. This is an option in lieu of installing electrical protective equipment or removing the transformer from service.

(J) Retrofill and reclassify a higher secondary voltage network PCB Transformer, located in a sidewalk vault, in or near a commercial building within 18 months or by October 1, 1990, whichever is later. This is an option in lieu of other requirements.

* * * * *

(Approved by the Office of Management and Budget under control number 2070–0003; the recordkeeping requirements of paragraph (a)(1)(xii) were approved by the Office of Management and Budget under control number 2070–0003.)

4. In § 761.40 by revising paragraph to read as follows:

§ 761.40 Marking requirements.

* * * * *

(j) PCB Transformer locations shall be marked as follows:

(1) Except as provided in paragraph (j)(2) of this section, as of December 1985, the vault door, machinery room door, fence, hallway, or means of access, other than grates and manhole covers, to a PCB Transformer must be marked with the mark M_L as required in paragraph (a) of this section.

(2) A mark other than the M_L mark may be used provided all of the following conditions are met:

(i) The program using such an alternative mark was initiated prior to August 15, 1985, and can be substantiated with documentation.

(ii) Prior to August 15, 1985, coordination between the transformer owner and the primary fire department occurred, and the primary fire department knows, accepts, and recognizes what the alternative mark means, and that this can be substantiated with documentation.

(iii) The EPA Regional Administrator in the appropriate region is informed in writing of the use of the alternative mark by October 3, 1988 and is provided with documentation that the program began before August 15, 1985, and documentation that demonstrates that prior to that date the primary fire department knew, accepted and recognized the meaning of the mark, included this information in firefighting training.

(iv) The Regional Administrator will either approve or disapprove in writing the use of an alternative mark within 90 days of receipt of the documentation of a program.

(3) Any mark placed in accordance with the requirements of this section must be placed in the locations described in paragraph (j)(1) of this section and in a manner that can be easily read by emergency response personnel fighting a fire involving this equipment.

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Monday
June 27, 1988

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09/13/88

federal register

Part V

Environmental Protection Agency

40 CFR Part 761

Polychlorinated Biphenyls; Exclusions, Exemptions and Use Authorizations; Final Rule

Enclosure (4)

DOC NO: CLEJ-00549-12.02-04/13/88

REPRODUCED AT GOVERNMENT EXPENSE

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 761

[OPTS-62053A; FLR 3369-2]

Polychlorinated Biphenyls; Exclusions, Exemptions and Use Authorizations

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This final rule amends existing rules controlling the processing, distribution in commerce, and use of PCBs by excluding additional materials containing less than 50 parts per million (ppm) polychlorinated biphenyls (PCBs) from regulation under section 6(e) of the Toxic Substances Control Act (TSCA) which generally prohibits the manufacturing, processing, distribution in commerce, and use of PCBs. EPA has found that activities allowed under this rule will not present unreasonable risks of injury to public health or the environment.

EFFECTIVE DATE: This rule shall be effective July 27, 1988.

FOR FURTHER INFORMATION CONTACT: Michael M. Stahl, Acting Director, TSCA Assistance Office (TS-799), Office of Toxic Substances, Environmental Protection Agency, Rm. EB-44, 401 M St., SW., Washington, DC 20460, (202-554-1404), TDD (202) 554-0551.

SUPPLEMENTARY INFORMATION: EPA is issuing this regulation to:

(1) Eliminate the Viton elastomer glove requirement for workers servicing heat transfer and hydraulic systems.

(2) Allow certain equipment and materials that have been adequately decontaminated to be used and distributed in commerce.

(3) Maintain the 3 parts per billion (ppb) effluent limit for releases from pulp and paper mills.

(4) Allow the use of waste oil containing <50 ppm PCBs as a fuel in certain combustion units.

(5) Exclude from the ban on processing, distribution in commerce, and use, certain products containing <50 ppm PCBs that were "legally" manufactured, processed, distributed in commerce or used prior to October 1, 1984.

I. Background

Section 6(e) of TSCA generally prohibits the manufacture, processing, distribution in commerce, and use of PCBs. Under section 6(e)(2), the Agency may authorize non-totally enclosed uses of PCBs upon a determination that such uses will not present an unreasonable risk of injury to health or the environment: Also, under section 6(e)(3), EPA may by rule grant 1-year exemptions from the general manufacture, processing, and distribution in commerce prohibitions. Such exemptions may be granted where the petitioner can demonstrate:

(1) That the activity to be exempted will not present an unreasonable risk of injury to health or the environment.

(2) That good faith efforts have been made to develop a substitute for PCBs which does not present an unreasonable risk.

In the Federal Register of May 31, 1979 (44 FR 31514), EPA issued its first regulation implementing the TSCA section 6(e)(2) and section 6(e)(3) prohibitions. That first rule (the PCB Ban Rule) included among its provisions a general exclusion from regulation for those activities involving PCBs at levels less than 50 parts per million (ppm). The only exception to the general exclusion for activities involving less than 50 ppm materials was a prohibition on the use of waste oil as a dust suppressant, sealant, or coating. This prohibition applied to waste oils with any detectable levels of PCBs.

The Environmental Defense Fund (EDF) successfully challenged this general 50 ppm regulatory cutoff, and on October 30, 1980, the U.S. Court of Appeals for the District of Columbia Circuit remanded the Ban Rule to EPA for further action consistent with its opinion. The Court determined that there was not substantial evidence in the record which would support the decision to exclude generally from regulation all materials containing PCBs at concentrations less than 50 ppm. The Court stated that a proper exclusion would need to be more finely tailored to the purposes of excluding ambient sources of PCBs, or, be premised upon a finding that the designated cutoff does not present an unreasonable risk of injury to health or the environment. The rulemaking history of the PCB Ban Rule is described in detail in the proposed "Exclusions, Exemptions and Use Authorizations" Rule published July 8, 1987 (52 FR 25838).

On February 20, 1981, the Chemical Manufacturers Association (CMA), EDF, and other industry intervenors in the *EDF* v. *EPA* litigation, filed a joint motion with EPA seeking a stay of the court's mandate. The Court granted the joint motion on April 13, 1981, thereby staying the issuance of its mandate pending the development by EPA of additional regulations concerning PCBs with concentrations less than 50 ppm.

EPA undertook the regulation of PCBs in concentrations less than 50 ppm in two phases. On October 21, 1982, the Agency issued the Closed and Controlled Waste Manufacturing Process Rule (47 FR 46980) which excluded from the general prohibitions a limited number of chemical manufacturing processes defined as "closed" or "controlled waste" processes. These processes either resulted in no PCB releases or releases only in controlled waste streams. In essence, the Closed and Controlled Rule allowed limited new manufacture of PCBs, but only when the PCBs were controlled and not released to the environment.

On July 10, 1984, EPA completed the second phase of rulemaking concerning low concentration PCBs. The "Uncontrolled Rule" (49 FR 28154) was issued regulating manufacturing processes generating low concentration PCBs in other than "closed" and "controlled waste" processes as well as other activities involving previously generated low concentration PCBs. This second Rule excluded from regulation additional manufacturing processes that generated PCBs as byproducts and impurities and allowed the limited recycling of PCBs in the manufacture of asphalt roofing materials and paper products. EPA found that these additional activities could be excluded from the general prohibition on the manufacture, processing, distribution in commerce, and use of PCBs because these other activities do not present an unreasonable risk of injury to public health or the environment.

On October 1, 1984, the date that the Uncontrolled Rule became effective, the court lifted its stay and any activity involving any quantifiable level of PCBs was banned unless EPA had specifically excluded, exempted, or authorized the activity by regulation (49 FR 28173, July 10, 1984).

The practical effect of this action was to make illegal many activities involving previously generated PCBs which were neither anticipated nor specifically evaluated during the development of the Uncontrolled Rule. Many activities involving low concentrations of previously generated PCBs were now prohibited, regardless of the fact that they may have presented no greater risk than certain activities specifically allowed in the July 10, 1984 rule.

Petitions seeking judicial review of the July 10, 1984 rule were filed on September 24, 1984, in the U.S. Court of Appeals for the District of Columbia Circuit by the American Paper Institute (API), the Fort Howard Paper Company (Ft. Howard), the Outboard Marine Corporation (OMC), and the American

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Die Casting Institute (ADCI). The challenges were consolidated for resolution, and the Chemical Manufacturers Association (CMA) entered the litigation as an intervenor and respondent. EPA recognized the concerns of the petitioners, and on August 7, 1986, EPA entered into a settlement agreement. EPA agreed to propose specific amendments to the July 10, 1984 regulation to address the concerns of the petitioners.

EPA proposed, in the Federal Register of July 8, 1987 (52 FR 25838), to amend the July 10, 1984 PCB Rule (the "Uncontrolled Rule") by excluding additional materials from regulation based on EPA's determination that activities involving these materials do not present an unreasonable risk of injury to health or to the environment. In the July 8, 1987 proposed rule, EPA proposed the following amendments to the regulations governing the processing, distribution in commerce, and use of PCBs.

1. To generally authorize the processing, distribution in commerce, and use of products containing less than 50 ppm PCBs provided that the PCBs present in the products were legally manufactured, processed, distributed in commerce, and/or used prior to October 1, 1984. The only exception that EPA proposed to this generic exclusion of activities involving less than 50 ppm PCBs, was to place limitations on the use of oil containing less than 50 ppm PCBs as a fuel. EPA proposed to restrict the burning of oil containing less than 50 ppm PCBs to industrial boilers and furnaces, which EPA believes, as a class, will provide for more efficient combustion than nonindustrial boilers and furnaces.

2. To authorize the distribution in commerce of equipment and other materials contaminated with PCBs from a spill, provided that such materials are decontaminated in accordance with EPA's applicable PCB spill cleanup policies.

3. To eliminate the water discharge limit of less than 3 micrograms per liter (3 ug/L), roughly 3 parts per billion (ppb), for total Aroclors leaving a paper processing site.

4. To eliminate the requirement that owners of hydraulic and heat transfer systems provide Viton elastomer gloves for workers servicing this equipment, and that workers wear these gloves when servicing heat transfer and hydraulic systems.

Of the proposed amendments, the proposal to generally authorize the processing, distribution in commerce, and use of products containing less than 50 ppm PCBs (with a restriction on the use of oil containing less than 50 ppm as a fuel in nonindustrial boilers) was the most significant of the July 8, 1987 proposals and drew the most comment. The Agency invited comments on various aspects of its proposal regarding products containing less than 50 ppm PCBs, including the exposure assessment that supports the Agency's decision to prohibit the burning of low-concentration PCB waste oil in nonindustrial boilers and furnaces. In the proposed rule, EPA indicated that it would use any new information submitted to the Agency to reconsider the appropriateness of its approach concerning the burning of oil containing less than 50 ppm PCBs as a fuel, with the option of excluding all used oil products (with less than 50 ppm PCBs) from regulation, without any restrictions on burning or other recycling activities.

EPA received over 40 comments during the public comment period which closed on September 8, 1987. EPA received comments from a number of different sources, including electrical utilities, chemical manufacturers, heavy equipment manufacturers, pulp and paper mills, members of trade associations, the electrical equipment service industry, and an environmental group.

The comments are summarized in "Response to Comments on the NPR for Amendments to the Uncontrolled PCBs Rule," June 1988. Several comments were also received following the close of the comment period, which EPA accepted and considered as they contained information not available earlier. On September 21, 1987, EPA held an informal hearing in Washington, DC at the request of the Electrical Apparatus Service Association (EASA). EASA addressed the issues of the buying and selling of used transformers, salvaging and rebuilding operations, and the effect of the Proposed Rule on this service industry. Six EASA members provided testimony on various provisions of the Proposed Rule, and a transcript of the hearing appears in the Docket.

EPA has considered all comments received in response to the Proposed Rule (as well as comments received after the close of the comment period) and has modified the rule where appropriate. A more detailed explanation of regulatory development history is presented in the Preamble to the Exclusions, Exemptions and Use Authorizations Proposed Rule of July 8, 1987. A brief overview of the final rule follows.

II. Overview of the Amendments

A. General Exclusion for Products Containing Less than 50 PPM PCBS

On October 1, 1984 (the effective date of the Uncontrolled Rule), the Court of Appeals for the District of Columbia Circuit lifted the stay of mandate that had been in place since the Court's decision to remand to EPA the general 50 ppm regulatory cutoff for PCBs. The effect of this action was to ban all PCB-related activities that were not specifically excluded, authorized, or exempted by EPA under TSCA regulations (40 CFR Part 761). The rule made illegal many activities involving previously generated PCBs at concentrations of less than 50 ppm. EPA had not anticipated the many activities that would be banned when the general 50 ppm cutoff was removed, and many of these activities were not evaluated during the development of the 1984 Uncontrolled Rule.

CMA and others raised specific concerns about the effect of this ban on the distribution in commerce, further processing, and use of products containing less than 50 ppm PCBs that were produced legally before October 1, 1984, but which were in storage for use or distribution in commerce when the Uncontrolled Rule became effective. These products, they argued, should be allowed to be further processed, distributed in commerce, and used, but EPA did not specifically authorize or exempt these products by the terms of the Uncontrolled Rule. EPA agreed with the principle that materials containing less than 50 ppm PCBs that were legally in existence before October 1, 1984 should be allowed to be further processed, distributed in commerce, and used. Accordingly, EPA agreed to address these concerns in a proposed rule.

In the July 8, 1987 proposed rule, the Agency proposed to amend the existing regulations by generally excluding from the TSCA section 6(e) prohibitions the processing, distribution in commerce, and use of products containing less than 50 ppm PCBs, provided these products were legally manufactured, processed, distributed in commerce, or used prior to October 1, 1984. The term "legally," as used in this exclusion, includes products created from PCB activities allowed by EPA by regulation, by exemption petition, by settlement agreement, or pursuant to other Agency-approved programs. The only exception that EPA proposed to this generic 50 ppm cutoff for processing, distribution in commerce, and use of PCBs was a restriction on the use of oil containing less than 50 ppm as

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a fuel in nonindustrial boilers and furnaces. Materials containing less than 50 ppm PCBs as a result of a spill of 50 ppm or greater material after the effective date of the disposal regulations (July 2, 1979) are not excluded from regulation by the terms of this provision.

In this final rule, EPA has adopted this generic exclusion based upon its determination that activities involving products containing less than 50 ppm PCB generally do not present an unreasonable risk of injury to human health or the environment. EPA's analyses demonstrate that the incremental risks associated with the processing, distribution in commerce, and use of products with PCB levels up to 50 ppm are outweighed by the tremendous costs that would be incurred by banning the further processing, distribution in commerce, and use of PCBs at these levels.

While EPA has included used oil products containing less than 50 ppm PCBs within the class of "excluded PCB products," the Agency is restricting the use of PCB containing oil as a fuel. EPA has also determined that the burning of PCB containing oil in concentrations below 50 ppm in industrial boilers and furnaces does not present an unreasonable risk to public health or the environment under normal operating conditions. However, the finding of no unreasonable risk for the use of PCB-containing oil as a fuel does not include the burning of PCB containing oil under combustion conditions which are likely to promote the formation of polychlorinated dibenzofurans (PCDFs). EPA believes that among known classes of boilers and furnaces, nonindustrial boilers and furnaces are most likely to create combustion conditions conducive to the formation of PCDFs and that the burning of PCB containing oil as fuel during startup and shutdown operations in industrial boilers and furnaces are also likely to create combustion conditions conducive to incomplete combustion. Further, PCDFs are considered to be more toxic than PCBs and their formation and release during the burning of oil under certain combustion conditions in nonindustrial boilers and furnaces could present a significant risk to public health and the environment. Thus, EPA is restricting the burning of oil containing less than 50 ppm PCBs as a fuel to industrial boilers and furnaces except during startup and shutdown operations.

B. Land Application of Sewage Sludges

Land application practices involving PCBs at levels less than 50 ppm are governed by provisions of non-TSCA regulatory programs. Therefore, EPA is not addressing the land application of sewage sludges under this rule because any risks from these activities can be eliminated or reduced by action taken under other laws administered by EPA. EPA has the authority to manage sewage sludge and other wastes containing less than 50 ppm PCBs (43 FR 24803, June 7, 1978), under the Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA) programs. Further discussion of this issue can be found in the Proposed Rule at 52 FR 25855.

C. Use Authorization for Hydraulic and Heat Transfer Systems—Requirement for Use of Viton Gloves

In the 1979 Ban Rule (44 FR 31514), EPA authorized the non-totally-enclosed use of PCBs at concentrations of 50 ppm or greater in hydraulic systems and in heat transfer systems (40 CFR 761.30 (d) and (e)). The 1979 use authorizations contained conditions relating to testing and retrofitting which were designed to reduce the concentrations of PCBs in these systems to levels less than 50 ppm by July 1, 1984.

In the July 10, 1984 Uncontrolled Rule, EPA authorized the use of PCBs in hydraulic and heat transfer systems at concentrations less than 50 ppm for the remainder of their useful lives. EPA found that the continued use of these systems did not present an unreasonable risk of injury to public health or the environment. The 1984 use authorization, however, imposed a condition on the continued use of this equipment which required owners of systems to provide workers with Viton elastomer gloves for protection against dermal exposure to PCBs. Outboard Marine Corp. (OMC) and the American Die Casting Institute (ADCI) raised concerns about the Viton glove requirements in a settlement discussion with EPA. They believed this requirement unnecessary to prevent unreasonable risk.

After reviewing the record for its original decision to require the use of Viton gloves, EPA found that the cost associated with requiring the use of gloves was significantly higher than originally estimated. Further, EPA also found that the risks posed by servicing heat transfer and hydraulic equipment containing less than 50 ppm PCBs did not outweigh the large costs associated with requiring the use of Viton gloves, or any other effective glove that is commercially available.

Accordingly, EPA is amending the authorization for hydraulic and heat transfer systems containing less than 50 ppm PCBs by eliminating the conditions requiring owners to provide, and maintenance workers to wear, gloves formulated from Viton elastomer. After evaluating economic information not examined during the 1984 rulemaking, and updating EPA's estimate of the concentration of PCBs in these systems as of 1987, EPA has determined that the servicing of heat transfer and hydraulic systems without gloves does not present an unreasonable risk of injury to public health or the environment.

The Agency wishes to emphasize that the use of impermeable gloves to prevent dermal contact with PCB-containing fluids may be warranted but the choice of such protection will be dependent on factors such as the duration of occupational exposure, concentration of PCB-containing fluid, and the costs and permeability of the glove material.

D. Water Discharge Limit of 3 PPB Total Aroclors for Pulp and Paper Processes

The July 10, 1984 rule permitted PCB recycling activities among two manufacturing industries—asphalt roofing materials manufacturers and manufacturers of pulp and paper products. Five conditions were set forth in the definition of "recycled PCBs," including a limitation on the level of PCBs allowed in water effluents. The effluent limit in the Uncontrolled Rule limited the amount of Aroclor PCBs in water discharged from these PCB processing sites to less than 3 micrograms per liter (μg/L) for total Aroclors (roughly 3 parts per billion (3 ppb)).

Petitioners, Fort Howard and the American Paper Institute, filed a joint petition challenging the 3 ppb total Aroclors discharge limit for pulp and paper mills. The major concerns were that the regulation did not allow for excursions above 3 ppb due to higher PCB levels in recycled paper entering the process and that the TSCA concentration-based standard unfairly penalized those mills who conserved water and had a decreased volume flow in their effluent discharges.

EPA proposed to eliminate the 3 ppb water effluent standard for PCBs leaving pulp and paper mills for several reasons, including: (1) EPA's belief that PCB discharges from pulp and paper mills are being adequately regulated by state permitting authorities, and (2) EPA's recognition that under the recently enacted CWA, Congress now requires that all states adopt water quality criteria within 2 years for chemicals which have been evaluated by EPA. Since water quality criteria exist for PCBs, EPA believed that it had additional assurance that all PCB

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effluents from recycling processes would be controlled, eliminating the need for section 6 action under TSCA.

EPA has considered the comments and data submitted on the adequacy of state permitting programs and concluded that it is necessary, at this time, to retain the water discharge limit in the definition of "Recycled PCBs" given the present status of some state NPDES permits and the foreseeable delays in implementing state revisions of water quality standards.

In addition, in light of comments received, that indicated a concentration-based standard unfairly penalized those mills who conserved water, the final rule requires manufacturers who process raw materials contaminated with Aroclor PCBs to comply with either a concentration or a mass-based limit. Allowing for a mass-based limitation (i.e., discharge requirements may be met by limiting the volume flow) is consistent with the Clean Water Act's approach to restricting discharges as well as the approach followed by states under their discharge-permitting authorities. EPA believes it prudent to be consistent with approaches already used by the Agency and state authorities and permit writers for controlling the PCB discharge limit into water. Allowing for a mass-based limitation will continue to regulate the absolute amount of PCBs added to the environment from a point source. EPA has not changed the 3 ppb standard for discharges from asphalt roofing material manufacturing because these manufacturers have not indicated a problem in meeting that standard.

E. Materials Decontaminated Pursuant To Spill Cleanup Policies

The PCB Spill Cleanup Policy (40 CFR Part 761, Subpart G) became effective on May 4, 1987. The policy establishes uniform cleanup levels for specified spill types and locations. The policy prescribes cleanup levels for different types of "spills" according to the PCB concentrations involved in the spill, the type of material contaminated, and the spill location. The Spill Cleanup Policy reaffirms a longstanding Agency policy of allowing the continued processing, distribution in commerce, and use of materials that have been cleaned to Agency standards.

In the July 8, 1987 proposal, EPA proposed to authorize the distribution in commerce and use of materials, equipment, and structures that had been decontaminated in accordance with applicable spill cleanup policies in effect at the time of decontamination, or if not previously decontaminated, then decontaminated at the time of distribution in commerce. Although these materials will be contaminated with low levels of PCBs, EPA proposed to authorize these activities because EPA has already determined that this residual level of contamination will not present unreasonable risks of injury to public health or the environment.

This final rule addresses materials contaminated with low level PCBs that resulted from a spill of controlled material (PCBs in concentrations of 50 ppm or greater). EPA is excluding from the TSCA section 6(e) prohibitions on the distribution in commerce and use of any equipment, structures, and other materials contaminated with PCBs, that are not otherwise authorized by 40 CFR Part 761, provided that these "materials" were decontaminated in accordance with applicable PCB cleanup policies in effect at the time of decontamination, or, if not previously decontaminated, then decontaminated at the time of distribution in commerce in accordance with the current cleanup policy.

III. Discussion of Amendments

Forty-two comments were received during the comment period. The majority of the comments received in this rulemaking generally agree with the amendments proposed in the July 8, 1987 Federal Register notice. However, several modifications to the rule were suggested by the commentors. This Unit of the Preamble discusses the major comments made in response to the proposed rule. EPA's responses to these comments, EPA's findings, and the rationale for any additional regulatory requirements. Refer to the support document "Response to Comments received on the NPR for Amendments to the Uncontrolled PCBs Rule," which appears in the Rulemaking Record for EPA's responses to comments not addressed here.

A. 50 PPM Regulatory Cutoff

1. *Excluded PCB Products* EPA's July 8, 1987 proposed rule generally excluded from the TSCA section 6(e) prohibitions, the processing, distribution in commerce, and use of products containing less than 50 ppm PCB concentration provided these PCB-containing products were legally manufactured, processed, distributed in commerce, or used prior to October 1, 1984. The term "legally" as used in this exclusion includes activities and products created by these activities EPA allowed by regulation, by exemption petition, by settlement agreement, or pursuant to other Agency approved programs. EPA requested comments on its case studies of the costs and benefits of regulating PCBs in concentrations below 50 ppm in: Investment casting waxes and products contaminated with inadvertently generated PCBs prior to the effective date of the Uncontrolled Rule. The following addresses those comments and identifies other examples of products that are included in this generic exclusion.

There was strong general support from all commentors on the proposal to generally exclude from further regulation products that were legally contaminated with previously generated PCBs at levels under 50 ppm prior to October 1, 1984. The proposal was supported by chemical manufacturers, other industries, and by utilities concerned with TSCA prohibitions on the repair and rebuilding of electrical equipment. EPA received no comments on this proposal from environmental groups.

The major criticism expressed about the general exclusion for products contaminated at less than 50 ppm was EPA's lack of clarity in defining what activities and "products" were excluded from regulation by the 50 ppm cutoff. Particularly, these commentors support EPA in its decision to exclude a broader class of products than was described by the precise terms of the definition set forth in the Settlement Agreement, but ask that EPA clarify the regulatory language to better express this intent.

The precise terms of the Settlement Agreement call for the Agency to propose to authorize the processing, distribution in commerce, and use of existing stocks of products contaminated with PCBs at concentrations less than 50 ppm, in cases where these products were legally manufactured, processed, or distributed in commerce before October 1, 1984. As noted in comments by Southern California Gas Company (SoCalGas), strictly limiting the definition of what is excluded would have the effect of placing any products contaminated by "ambient" PCBs after the 1984 date within a class of products still subject to the ban on processing, distribution in commerce, and use. The result is seen by SoCalGas to be at odds with the Agency's expressed intent not to regulate "old" or ambient" PCBs at levels of less than 50 ppm (52 FR 25843, July 8, 1987). SoCalGas is concerned that by a strict reading of the rule, many of the products contaminated with low levels of PCBs from historic PCB uses or during recycling activities would still be regulated.

The Agency acknowledges the validity of these comments. It is the Agency's intent to allow the processing, distribution in commerce, and use of

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PCBs in concentrations below 50 ppm provided that:

a. The PCBs were legally manufactured before October 1, 1984.

b. If the PCBs were processed, distributed in commerce, or used before October 1, 1984, they were legally processed, distributed in commerce or used.

c. The resulting PCB concentration (i.e., below 50 ppm) is not a result of dilution, or leaks and spills of PCBs in concentrations over 50 ppm after the effective date of the disposal regulations.

The only exceptions to the general 50 ppm cutoff for the use of previously generated PCBs are EPA prohibitions on the use of PCBs at any detectable concentration as a sealant, coating, or dust control agent, and the use of PCBs at >2 ppm as a fuel in nonindustrial boilers and furnaces. Since EPA received many comments on its proposal to restrict the use of less than 50 ppm material as a fuel in nonindustrial boilers and furnaces, EPA has summarized these comments separately in Unit III.B of this document.

In response to an information request in the July 8, 1987 proposal, the Outboard Marine Corporation (OMC) submitted data on the concentration of PCBs in investment casting waxes. At the time of the Proposed Rule, the Agency supported the inclusion of investment casting waxes among the class of excluded products based upon mathematical modeling which estimated average PCB contamination in these waxes to be 10 ppm. The Outboard Marine Corporation survey data, collected over the last 2 years, indicated that only 18 percent of the approximately 70 samples tested contained detectable levels of PCBs. The average PCB concentration for those samples was 14 ppm. This information confirms the Agency's earlier estimates and supports the inclusion of investment casting waxes among the general PCB products exclusion.

The comments also expressed strong and uniform support for the proposed products exclusion and its effect on the further use, processing, and distribution in commerce of components derived from non-PCB electrical equipment (PCB electrical equipment containing less than 50 ppm PCBs in dielectric fluids).

Several commentors requested that the rule make express reference to heat transfer and hydraulic equipment, and other miscellaneous equipment in use, or in storage for reuse, which has been in contact with material less than 50 ppm PCBs, rather than leaving this class of equipment inferentially covered by the general products language. The Agency has included these items and their fluids as examples of products covered by the exclusion. Hydraulic and heat transfer equipment which has been retrofilled and "reclassified" according to TSCA procedures and regulations falls within this class of excluded products. General Motors Corporation submitted cost data on the effects of removing the prohibition of distribution in commerce and processing of this equipment. Two General Motors facilities would experience an approximate $3 million savings when the TSCA prohibitions against distribution in commerce of non-PCB heat transfer and hydraulic equipment in use or in storage are lifted.

EPA also notes that component parts derived from the rebuilding or salvaging of electrical equipment containing PCBs at levels less than 50 ppm qualify as "excluded PCB products". In addition to component parts, the exclusion also includes such activities as buying, selling, and servicing of used non-totally enclosed transformers that contain fluids with concentrations of less than 50 ppm PCBs. As noted in the Proposed Rule, 52 FR 25854, the Agency believes that recycling activities involving these components do not present any significantly greater risks than other activities connected with the unrestricted use of non-PCB electrical equipment.

Two commentors requested that the exclusion for non PCB equipment recycling activities be extended to PCB-contaminated electrical equipment (containing concentrations of 50 to 500 ppm PCB). The Electrical Apparatus Service Association (EASA) and Utility Solid Waste Activities Group (USWAG) joined in seeking the extension of the exemption to components from PCB-contaminated electrical equipment, or in the development of a new decontamination method which would allow electrical utility operating companies to continue their activities. Concern was raised about current inventories of used components which would be used in the repair of PCB-contaminated transformers. In most cases, these components are no longer manufactured, and the entire transformer may be rendered useless without the necessary used replacement parts.

EPA notes that the regulations presently authorize a utility that owns used components removed from electrical equipment owned by the same utility company to use these component parts in the repair of other equipment under its ownership. However, if a component part from PCB-contaminated electrical equipment is used to repair non-PCB equipment, the equipment must be considered to be PCB-contaminated after repair.

In responses to EASA's comments EPA also notes that the existing PCB regulations already provide a mechanism for "decontaminating" PCB-contaminated electrical equipment so that it may be treated in the same manner as non PCB electrical equipment. The PCB regulations allow the reclassification of PCB-contaminated electrical equipment. Once reclassified, a piece of equipment may be salvaged for parts without restriction.

Finally, TSCA section 6(e) provides EPA with the authority to grant exemptions from the prohibition on distribution in commerce. This mechanism is available for those who demonstrate to EPA that their activity will not present an unreasonable risk of injury to public health and the environment and that good faith efforts have been made to develop a substitute for PCBs in the activity. For example, in 1984 the Agency granted the members of EASA a 1-year exemption to process and distribute in commerce PCB-contaminated transformers and component parts. The 1-year exemption would allow EASA time to inform its members how to comply with the PCB regulations, thereby allowing EASA members time to phase out their PCB related activities that required exemptions.

EPA is adopting the generic 50 ppm exclusion for processing, distribution in commerce, and use, based on the Agency's determination that the use, processing, and distribution in commerce of products with less than 50 ppm PCB concentration will not generally present an unreasonable risk of injury to health or the environment. EPA could not possibly identify and assess the potential exposures from all the products which may be contaminated with PCBs at less than 50 ppm. However, EPA concluded that the majority of the hypothetical exposures developed in support of the July 10, 1984 rule were not significant, and in incidents where higher exposures were calculated, further evaluation of the assumptions showed that the estimated exposures overestimated actual expected exposures from the products. EPA believes that the qualitative conclusions reached in 1984 with regard to products (with concentrations up to 50 ppm) from excluded manufacturing practices apply with equal force to the products excluded by this final rule. In addition, EPA has concluded that the costs associated with the strict prohibition on PCB activities are large

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and outweigh the risks posed by these activities (see 49 FR 28179, July 10, 1984).

B. Use of PCBs Below 50 PPM as a Fuel

The July 6, 1987 proposed rule proposed to amend the PCB regulations to, in general, authorize used oil recycling activities (use, processing, and distribution in commerce) involving used oil containing less than 50 ppm PCBs. Specifically, EPA proposed to include used oil among products excluded from regulation under the definition of "excluded PCB products." However, EPA proposed to restrict used oil recycling activities by prohibiting the burning of used oil containing any quantifiable level of PCBs as a fuel in nonindustrial boilers.

The proposed rule also proposed to amend the definition of "qualified incinerator" codified at 40 CFR 761.3. EPA proposed to delete the reference to approved high efficiency boilers under 761.60(a)(3) and to replace that deleted language with a reference to the high efficiency boiler criteria and notification requirements set forth in § 761.60(a)(2). The proposal required the same combustion conditions as previously required but sought to replace the approval requirements with the simpler requirement of notification to the EPA Regional Administrator as stated in § 761.60(a)(2)(ii)(B).

The proposal also sought to make another class of combustion facilities eligible for burning used oils with less than 50 ppm PCBs. EPA proposed to include combustion facilities recognized as acceptable for burning off specification "used oil fuels" under 40 CFR Part 266, Subpart E. This second class consists of the industrial "furnaces" and "boilers" which are identified in 40 CFR 266.41(b) and whose owners have notified EPA of their used oil burning activities. The criteria for these boilers and furnaces are identified in 40 CFR 260.10.

Today's rule allows the burning of oil containing between 2 and 49 ppm PCBs as a fuel in RCRA-approved industrial boilers and furnaces. The rule requires that RCRA approved units used to burn PCB oil between 2 and 49 ppm must be operating at normal operating temperatures (this requirement prohibits burning such fuels during either startup or shutdown operations). By prohibiting the use of oil as a fuel between 2 and 49 ppm PCBs during startup and shutdown operations for these units, EPA is effectively eliminating another source where conditions are conducive to the incomplete combustion of PCBs and the formation of PCDFs. The prohibition on the use of this oil during startup and shutdown operations is consistent with the Agency's current regulations for disposing mineral oil dielectric fluid (50–499 ppm PCBs) in high efficiency boilers set forth in 40 CFR 761.60(a)(2)(iii)(A)(5). Similar to the requirements in todays rule, the existing rules regarding high efficiency boilers limit the fuel feed rate for PCBs. Section 761.60(a)(2)(iii)(A)(4) states that mineral oil dielectric fluid cannot compose more than 10 percent, 5–49.9 ppm PCBs, (on a volume basis) of the total fuel feed rate. EPA believes that the requirements for burning PCB fluid between 2 and 49 ppm PCBs during startup and shutdown operations in industrial boilers and furnaces should be consistent with the existing disposal rules set forth in 40 CFR 761.60.

Today's rule also prohibits the burning of oil containing detectable concentrations of PCBs in nonindustrial boilers and furnaces because these units, as a class, are more likely than RCRA-approved industrial boilers and furnaces to operate under combustion conditions that are conducive to the volatilization of PCBs and the formation of toxic products from the incomplete combustion of PCBs.

In the Proposed Rule, EPA concluded that nonindustrial boilers are typically small to medium size unmanned units that may not achieve optimum combustion conditions when burning fuel that the unit was not designed to burn. EPA believed that very few, if any, of these units are equipped with emissions control equipment, while many industrial boilers/furnaces are so equipped. Further, nonindustrial units are more likely to be located in an urban setting where sources are frequently clustered together, they generally have lower stack heights, and have a sporadic mode of operation. Emissions plumes from numerous sources can overlap and increase ambient air concentrations of PCBs and PCDFs while simultaneously exposing a larger population. In contrast, large boilers and industrial furnaces are more likely to be operated by trained operators and equipped with combustion controls to maintain combustion efficiency when burning fuels mixed with low concentration PCBs.

The Agency requested comments on its proposal to prohibit the burning of used oil containing less than 50 ppm PCBs in nonindustrial boilers. (See 52 FR 25854, July 8, 1987). Several commentors asserted that all used oil products under 50 ppm should be excluded from all TSCA regulations, including burner restrictions. Several commentors who opposed the burner restrictions focused their objections on the risk assessment that EPA developed in support of its proposal. Two commentors stated that the assessment overstated the potential of PCDF formation, and criticized the conservative assumptions in the risk assessment, including the frequency and duration of used oil burning in residential boilers. However, EPA did not receive substantive information to allow the Agency to reevaluate the risk of PCDF formation and make the required finding that such burning does not present unreasonable risks. Commentors did not provide information to support an adjustment to the assumptions underlying the assessment for the potential for PCDF formation such as combustion efficiency, residential combustion unit sizes and types, operating temperatures formation of PCDFs under differing combustion conditions, etc.

In the risk assessment developed for the proposed rule, the Agency concluded that inhalation exposures associated with the volatilizing of PCBs during the burning of used oil (with PCBs at the 50 ppm level or lower) in small boilers were not significant. However, the Agency's quantitative oncogenic risk for the potential inhalation exposures associated with the formation and release of polychlorinated dibenzofurans (PCDFs) from small- and medium-sized nonindustrial boilers (which may operate under inefficient conditions) was considered significant because the risks fall into the 1×10^{-5} to 1×10^{-4} range. Moreover, only 23 percent of this oil is burned this way; a prohibition does not create great economic impact. Since EPA received no data which refutes the risk assessment, the final rule retains the prohibition on the use of waste oil containing less than 50 ppm PCB as a fuel in nonindustrial boilers. Nonindustrial boilers include but are not limited to those located in single or multifamily residences; commercial establishments (such as hotels, office buildings, laundries, service stations, greenhouses); and institutional establishments (colleges, hospitals, schools, prisons).

In this rule, EPA is designating within the class of "incinerators" qualified to burn oil containing between 2 ppm and 50 ppm PCBs those:

(1) Incinerators approved for PCB destruction under § 761.70.

(2) High efficiency boilers which operate under the conditions of § 761.60(a)(2)(iii)(A) and whose owners have notified EPA of their used oil burning activities under § 761.60 (a)(2)(iii)(B).

(3) Incinerators approved under the authority of RCRA section 3005(c).

(4) Industrial furnaces and boilers which are identified in 40 CFR 260.10

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concentrations are likely to be well above the level of detection (i.e., 2 ppm) presents a greater likelihood for the formation of highly toxic byproducts associated with the poor combustion of higher concentration PCBs in these devices. Therefore, EPA, to remain consistent in avoiding such risks, is prohibiting the burning of PCB used oil as fuel in space heaters outside the automotive industry.

Several commentors have requested that the Agency clarify the term "detectable level of PCBs" which is used to describe the used oils to which this burning restriction applies (40 CFR 761.20(e)). The preamble of the Proposed Rule (52 FR 25854) stated that "detectable" means "practical limit of quantitation (i.e., 2 ppm). The Chemical Manufacturers Association recommended that EPA include this clarification in the regulatory language by referring specifically to the definition, "less than 2 micrograms per gram from any resolvable gas chromatographic peak," previously included in the TSCA regulations for nondetectable PCBs in products of closed waste manufacturing processes (47 FR 46995, October 21, 1982). This definition has been accepted by the Agency and will be incorporated in the Rule to clarify which used oils are considered to have detectable PCBs.

Several comments were received which addressed the availability of analytical methods for meeting the level of detection and the impact of this level on recycling and burning of waste oil for fuel. James River Corporation and Texaco Inc. requested that the Agency consider a level higher than the one proposed—specifically—5 ppm—which was felt would meet the goals of the regulation and the concerns for feasibility expressed by recyclers. Other thresholds suggested were 20 ppm (on the grounds that it was feasible in the field); 25 ppm, or even 35 ppm.

The Agency has determined that analytical procedures have been demonstrated to be capable of accurately and reproducibly determining the concentration of PCBs in Bunker C Fuel Oil at 2 ppm using a quantitation procedure based on one congener per homolog standard. Both Gas Chromatography/Electron Capture and Gas Chromatograph/Hall Detector Electron Capture are effective and easily implemented. Therefore, the level of quantitation (articulated in earlier TSCA regulations—47 FR 46995) is specified as 2 ppm.

A large number of comments addressing an alternative PCB threshold implicitly endorsed blending to meet any specified PCB threshold. These comments pointed out that the TSCA prohibitions on dilution do not apply where a regulation specifically allows it, and that allowing blending would make the rule consistent with the RCRA Burn Ban Rule. It was also suggested that blending would facilitate the injection of the fuel into the boiler, and result in better combustion and destruction of the PCBs.

Unlike RCRA regulations for hazardous waste disposal, the TSCA PCB disposal regulations dictate different disposal requirements depending upon the concentration of PCBs in the waste. This approach was adopted because EPA recognized that PCBs are ubiquitous in the environment and are present in measurable quantities as contaminants in many materials. EPA struggled to establish a manageable disposal system that recognized the widespread contamination that 30 or so years of indiscriminant disposal created yet one that would strictly control the disposal of any PCBs removed from use after the Congressional ban in 1977. The result was a disposal system based upon PCB concentrations in waste and a strict prohibition against dilution as a mechanism for avoiding proper disposal.

Allowing blending-down to either below the level of detection or below 50 ppm PCBs under this rule would be a departure from EPA's longstanding position that requires material once tested for PCB concentration to be treated under the regulations based upon its measured concentration. EPA is acutely aware of the difficulties in effectively monitoring compliance with the prohibition on dilution and is concerned about the potential avenue that it would be opening up for the improper disposal of 50 ppm or greater materials in allowing blending-down to either below the level of detection or below 50 ppm in this rule. Therefore, EPA is maintaining its longstanding policy to prohibit dilution.

EPA's proposal to allow batch testing by marketers as a way of saving analytical testing costs met with approval in the comments. The National Oil Recyclers note that, by the time a shipment of used oil reaches a processing plant, it is a mixture of oil from several generators. They maintain that the cost of testing each individual sample before it was added to a shipment would be prohibitive. In addition, they indicate that turn-around time for laboratory tests may range from a few days to 2 weeks, unless a high surcharge is paid for priority service. Costs for PCB testing have been cited as ranging from $25 to $85 per sample. With the low current markets in waste oil, as highlighted in comments from Harbor Oil, Inc.; the expense of requiring individual samples, rather than batch testing, would be prohibitive. The Agency regulations, therefore, allow for batch testing, along with certification. It is important to note that, if any PCBs at a concentration of 50 ppm or greater, have been added to the container, then the total container contents must be considered as having a PCB concentration of 50 ppm or greater for purposes of complying with the disposal requirements of 40 CFR 761.60. Batch testing, along with proper records documentation, provides for an environmentally sound program for collecting and burning oils with detectable levels of PCBs while at the same time preserving and protecting our limited waste oil markets.

This final rule makes the TSCA regulations more consistent with the Agency's overall strategy for regulating the recycling of used oil. After evaluating the risks posed by these activities, EPA has determined that the use, processing, and distribution in commerce of used oil containing less than 50 ppm PCBs does not generally present an unreasonable risk of injury to human health or the environment. EPA is not able to determine that burning used oil as fuel in nonindustrial boilers will not present an unreasonable risk. EPA believes that the burning of PCB-containing used oil fuels in combustion facilities which operate under inefficient combustion conditions will promote the formation of highly toxic PCDFs; (see 52 FR 25849–50 for further discussion on exposure risks associated with the incomplete combustion of PCBs).

Due to the potential for the formation of PCDFs in inefficient combustion facilities burning PCB-containing used oil, EPA believes that it is prudent to adopt an approach in this final rule which is consistent with that of the RCRA Burn Ban Rule for burning hazardous waste and off-specification used oil fuels. EPA believes that the rationale set forth in the RCRA Burn Ban Rule preamble for designating nonindustrial boilers as the prohibited class of combustion facilities (50 FR 49191) provides a compelling argument for similarly restricting the burning of used oil products containing PCBs at the less than 50 ppm level. This prohibition on burning PCB-contaminated oils in non-industrial boilers will afford an interim measure of prudent control until EPA completes its ongoing comprehensive evaluation of combustion conditions in various boilers and furnaces. Upon completing this evaluation, EPA will promulgate rules prescribing combustion performance

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standards under RCRA. The net result will be to allow or disallow burning of hazardous waste fuels based on actual combustion capabilities rather than their classification as an "industrial" or "nonindustrial" boiler or furnace.

In addition to a consideration of the toxicity of PCBs and the magnitude of exposure to humans and the environment, the TSCA unreasonable risk standard requires EPA to consider the economic impacts and other societal costs associated with the regulation of a chemical. EPA evaluated the economic impacts of maintaining the current prohibition of all used oil recycling activities. (see Ref. 28, Support Document entitled "PCB Rule Revision: Cost-Effectiveness Analysis and Estimates of Exposed Population.") EPA concludes that the risks associated with the recycling (use, processing, and distribution in commerce) of used oil products containing less than 50 ppm PCBs are generally outweighed by the enormous costs associated with prohibiting such activities, the cost associated with depriving society of the benefits of recycled oil products, and the net reduction in environmental protection associated with a curtailment in recycling activities. Secondly, EPA believes that the net regulatory impact on restricting the burning of used oil containing less than 50 ppm PCBs to industrial boilers and furnaces will be insignificant. This final rule makes PCB-containing used oil (<50 ppm PCBs) available to a much larger universe of eligible combustion facilities than allowed under the previous regulation. The availability of these combustion facilities (qualified incinerators, industrial furnaces, industrial boilers, utility boilers, etc.) and the availability of other recycling markets (e.g., other industrial uses and rerefining) should provide more than adequate capacity to handle any market shifts caused by the prohibition on burning in nonindustrial boilers. EPA believes that the oil management system has already responded to the Burn Ban Rule by diverting the bulk of used oil fuels away from the nonindustrial boiler market, and any further diversion resulting from this final rule should be minimal. For these reasons, EPA concludes that allowing the burning of PCB-containing used oil fuels (<50 ppm PCBs) under the conditions set forth in this document will not present an unreasonable risk of injury to health or the environment.

In this final rule, to be consistent with the approach adopted by the RCRA Burn Ban Rule for marketers and burners of used oil fuel, EPA is implementing a combination of limited testing requirements, prohibitions, and recordkeeping requirements for burners and marketers of used oil fuel between 2 and 49 ppm PCBs. These provisions are to help ensure compliance with the prohibition on burning this PCB used oil fuel in nonindustrial boilers and furnaces.

For regulatory purposes used oil fuel is presumed to contain PCBs above the practical limit of quantitation (i.e., 2 ppm) and therefore would be subject to these restrictions, unless the marketer obtains PCB analyses (test data) or other information documenting that the used oil fuel does not contain detectable levels of PCBs. The Agency believes that presuming used oil to be contaminated with PCBs above 2 ppm is a prudent regulatory tool to ensure the proper burning of waste oils. This is not meant to imply that all waste oil is, without question, contaminated with PCBs above the level of detection, as test data and other information documenting the oil's concentration will demonstrate. The first person who makes the claim that the used oil fuel does not contain PCBs at quantifiable levels must obtain the analyses or "other information" to support his claim. The "other information" could include personal, special knowledge of the source and composition of the used oil, or a certification from the generator claiming that the oil does not contain PCBs above the practical limit of quantitation (2 ppm).

The prohibitions apply to both burners and "marketers" (as defined in 40 CFR 761.3). A person may market (process or distribute in commerce) used oil at levels between the practical limit of quantitation (2 ppm) and 50 ppm for energy recovery only to those burners who qualify either as a "qualified incinerator" under 40 CFR 761.3 or as a combustion device identified in 40 CFR 266.41(b). Before an eligible burner accepts its first shipment of used oil fuel containing PCBs at concentrations <50 ppm, but >2 ppm from a marketer, he will be required to provide the marketer a one-time written notice certifying that he will burn the used oil only in a qualified incinerator (§ 761.3) or in a combustion device identified in § 266.41(b). Marketers will be required to retain copies of their used oil analyses (or other information relating to PCB levels in oil) for 3 years; they would also be required to retain a copy of each certification that they have received from burners from the date of the last transaction with the burner.

By imposing the requirements on marketers and burners EPA believes it will effectively ensure compliance with the prohibition on the burning of used oil fuel in nonindustrial boilers. This is consistent with the RCRA Burn Ban Rule which imposes recordkeeping and reporting requirements controls to prohibit burning of off-specification used oil fuels in nonindustrial boilers.

C. Viton Glove Requirement

The Circuit Court's decision overturning EPA's rule which would allow a general 50 ppm cutoff, effectively prohibited the use of heat transfer and hydraulic systems containing less than 50 ppm PCBs. So, EPA, in the July 10, 1984 rule authorized the use of PCBs at concentrations less than 50 ppm in these systems for the remainder of their useful lives provided owners of these systems provided workers performing repair and maintenance operations on these systems with Viton elastomer gloves to protect against dermal exposure to PCB (40 CFR 761.30(d)(6) and 761.30(e)(6)).

The Viton glove requirement was the subject of many comments received after promulgation of the July 10, 1984 rule. Due to the interest aroused by this requirement, EPA reexamined the potential exposures and economic impacts presented by the inclusion of a protective clothing requirement referrin exclusively to gloves formulated from Viton elastomer. After considering additional economic information which was not considered during the previous rulemaking and after further evaluation of the potential exposures, the Agency has concluded that the Viton elastomer glove requirement is not necessary to protect against any unreasonable risks presented by the continued use of authorized heat transfer and hydraulic systems. Therefore, EPA proposed to delete the requirement from the use authorizations for heat transfer and hydraulic systems.

Several comments were received which supported the proposal to eliminate the exclusive Viton glove requirement for workers performing maintenance on heat transfer and hydraulic systems. General Motors Corporation suggested that the 1984 ris assessment greatly overstated the concentration of PCBs actually in the equipment. The data show that the average concentration of PCBs in hydraulic and heat transfer equipment to be 12 ppm. The commentor indicate that the assumption used in the 1984 r assessment, that the PCB concentratic are constant at 50 ppm over the entire period of exposure, is not consistent with the fact that the equipment does leak and is topped off with fluids containing no PCBs. The General Mot

data are consistent with the Agency conclusions expressed in the July 8. 1987 (52 FR 25841) proposed rule that the majority of the presently authorized hydraulic and heat transfer systems have PCB concentrations well below 50 ppm and support EPA's belief that the actual lifetime average PCB exposures resulting from servicing of heat transfer and hydraulic systems should be at least one order of magnitude less than those predicted by the 1984 assessment.

All commentors agree that the risk to maintenance workers did not warrant the costs associated with the exclusive Viton polymer requirement. The National Institute for Occupational Safety and Health (NIOSH) agreed that recommending only the use of Viton gloves is overly restrictive and not warranted based on recent research findings conducted for NIOSH by the Los Alamos National Laboratory (LANL). A number of alternative glove materials were suggested (Viton SFe. butyl. neoprene. Saranex Tyvek. nitrile. Teflone) which were shown to provide good protection against a PCB mixture (52 percent Aroclor 1254 in 48 percent trichlorobenzene) for at least 8 hours. The LANL studies, while developing information relative to the effectiveness of glove materials when handling high concentration PCBs, do not address effectiveness of lower cost glove materials for use with low concentration PCB mineral oils.

The Agency recognizes the concern expressed by NIOSH for worker protection during such time as they are engaged in contact with PCBs and strongly recommends the use of impermeable gloves and clothing designed to prevent skin contact with PCBs, particularly when PCBs are present in concentrations of 500 ppm or greater. The choice of glove material will depend on the concentration of PCBs, the duration of occupational contact with PCBs, and the cost and permeability of the glove material.

The Viton glove requirement arose from concerns caused by a May, 1984 exposure assessment conducted in support of the July 10. 1984 rule. (For details of the exposure assessment see Vol. 4 of support document for the July 10. 1984 rule entitled "Exposure Assessment for Incidentally Produced Polychlorinated Biphenyls"). The hypothetical worst case dermal exposure presented in this report was believed, at the time significant enough to justify the imposition of the Viton glove requirement. However, upon further examination. EPA has concluded that the 1984 assessment overstates the likely dermal exposures and associated risks and that the estimated exposures do not justify the imposition of the enormous costs associated with the previous protective glove requirement.

EPA also considered information not previously examined by the Agency concerning the costs to industry associated with the exclusive Viton glove requirement. At the time of the July 10. 1984 rule. Viton elastomer was the only material known to EPA which possessed the necessary resistance to PCB breakthrough. Although the costs of the Viton gloves were significant. EPA reasoned that the incremented costs associated with the inclusion of the Viton glove requirement were minimal relative to the costs which industry would incur without a use authorization for less than 50 ppm systems.

However, in response to numerous comments received after the July 10. 1984 rule. EPA reexamined the costs associated with the Viton glove requirement and found them to be exorbitant in light of the "worst-case" exposures estimated in the exposure assessment. The incremental costs associated with the Viton glove requirement are in the order of $600 million over 10 years. The Agency has concluded that the potential risks presented by these activities do not warrant the imposition of incremental costs of this magnitude.

As a result of the 1984 risk assessment which over estimated the risk of dermal occupational exposure to repair and maintenance workers and the incremented costs associated with the Viton glove requirement the Agency is amending the use authorizations for hydraulic and heat transfer systems by eliminating the conditions requiring owners to provide repair and maintenance workers with gloves formulated with Viton elastomer.

D. 3 PPB Water Effluent Limitation

The Uncontrolled PCB Rule set forth, among other things, the category of "recycled PCBs" processes that are excluded from the TSCA section 6(e) bans on manufacturing, use, and distribution in commerce. These excluded processes involved manufacturers who use raw materials contaminated with Aroclor PCBs to manufacture new products instead of using virgin materials. Recycling old products yields both environmental and economic benefits since that practice conserves natural resources, reduces energy use, and reduces solid waste generation.

In response to the proposal to exclude these activities in the Uncontrolled PCB Rule. EPA received information from only two manufacturing industries: The asphalt roofing materials manufacturers and manufacturers of pulp and paper products. After evaluating whether these specific activities would present unreasonable risks of injury to health and the environment. EPA announced in the July 10. 1984 rule that it would exclude these PCB recycling products and processes (pulp and paper and asphalt roofing), if certain conditions are met.

The provision which excludes "recycled PCBs" from the section 6(e) prohibitions is codified at 40 CFR 761.1(f). The term "recycled PCBs" is defined at 40 CFR 761.3 by five conditions that limit Aroclor PCB concentrations in the products, wastes water discharges, and air emissions. EPA determined in the final Uncontrolled PCBs Rule that PCB recycling activities conducted under these conditions would not present an unreasonable risk of injury to health or the environment.

The specific provision in the definition of "recycled PCBs" (40 CFR 761.3) that is the subject of this rulemaking pertains to provision number (4) which establishes the limits on releases of Aroclor PCBs in water discharges from sites processing paper products. The final rule retains the existing concentration-based discharge limit, but otherwise amends the provision by allowing a mass-based limitation. Provision number (4) stated: "The amount of Aroclor PCBs added to water discharged from a processing site must at all times be less than 3 micrograms per liter (μg/1) for total Aroclors (roughly 3 parts per billion)."

Petitioners, Ft. Howard and API, raised objections to this condition as it relates to discharges from mills in the pulp and paper industry. The major concerns were that the language which limited discharges to 3 ppb "at all times" (a concentration-based limitation) penalized paper mills which, in the interest of water conservation, decreased their volume flow or releases and, as a result, exceeded the 3 ppb limitation. EPA received no objections to this provision from the asphalt roofing industry.

EPA reexamined the 3 ppb Aroclors discharge limit for pulp and paper mills in light of the petitioners' claims and other comments received by the Agency. As a result, the Agency proposed to eliminate from the definition of "recycled PCBs" the provision limiting Aroclor PCB releases in water discharges from pulp and paper mills to 3 ppb.

EPA received comments both pro and con on this proposal. Some commenters

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supported the proposal to eliminate the 3 ppb limitation because they believed that PCBs in the effluents from pulp and paper mills were being adequately controlled under the CWA permit programs. They contended that the states and EPA regional offices are in fact doing an adequate job regulating PCB discharges in their NPDES permits.

EPA also received comments that opposed the proposal to eliminate the 3 ppb limitation, arguing that the current state of regulation by the states is inadequate to control discharges from pulp and paper mills and therefore a TSCA effluent limit should be maintained to exclude these activities from the processing prohibition. These commenters argued that removing this limit would create a gap in controlling PCB discharges into water.

At this time EPA has not established an effluent guideline for PCBs under the CWA. Although states have begun to revise their water quality standards under the Water Quality Act of 1987 for CWA toxic pollutants, this process will take longer than the expected 2 years to implement. EPA has considered the concerns about the adequacy of controls on PCB effluents through individual permits and concluded that it is appropriate to retain a water discharge limit in the definition of "recycled PCBs" given the present status of some state NPDES permits and the delays in implementing state revisions of water quality standards. EPA reached this conclusion in view of the fact that there is currently no effluent limitation guideline or standard for discharges of PCBs from pulp and paper mills and in view of the ongoing but as yet incomplete process in implementing state revision of water quality standards. Any subsequent PCB discharge standard promulgated under the CWA would obviate the need for a limitation in this rule, and EPA would revoke the limitation at that time.

The final rule describes the limit in a manner which requires manufacturers in the pulp and paper industry who use raw materials contaminated with Aroclor PCBs to comply with either a concentration or mass-based limit. Comments on the Uncontrolled Rule and the July 8, 1987 proposal to amend that rule pointed out the shortcomings in EPA's approach to establishing a water discharge limit solely as an absolute concentration limit. EPA agrees that the PCB water discharge limit in this rule should be consistent with mass-based approaches already used by EPA and state authorities and permit writers under the CWA.

When EPA established the 3 ppb water discharge limit forled PCBs, the intent was to control these additional uncontrolled PCBs released into the environment. The 3 ppb limit represented a level determined by EPA to be a universally achievable and reliable level of quantitation (LOQ) which would best ensure, together with the other restrictions in the definition, that no unreasonable risk of injury to health or environment would be posed by these manufacturing processes. Under the CWA, discharges are limited by a variety of technology-based effluent limitations and standards with more stringent water quality-based standards applied as needed. When EPA promulgated the Uncontrolled PCBs Rule, the Agency did not intend to create inconsistencies in the approaches to regulation of discharges.

Comments on the proposed rule show that establishing an equivalent mass limitation on water discharges from recycled PCBs activities would provide an equivalent level of protection as the 3 ppb limit. Allowing a mass limitation would regulate the absolute amount of PCBs added to the environment from a point source. EPA has considered these comments and decided that as an alternative to the 3 ppb concentration-based limit, persons may comply with this concentration limit converted to a mass-based limitation. Conversion from concentration to mass-based limitations can be accomplished by multiplying the appropriate subcategory flow factor (average wastewater flow expressed as kl per kkg product) for a facility by the concentration limit (expressed in ppb) and an appropriate conversion factor (1.0E-06) to obtain the amount of PCBs allowed per weight of product (expressed as kg PCBs per kkg product). The total daily discharge allowance for PCBs would then be calculated by multiplying the amount of PCBs allowed per weight of product by the annual average daily production for the facility (expressed as kkg product per day). Further guidance to convert the concentration-based standard to the mass-based limitation is available in the public record.

E. Distribution in Commerce and Use of Decontaminated Equipment, Structures, and Materials

In the July 8, 1987 proposed rule, EPA proposed to exclude from regulation an additional class of materials contaminated with PCBs at levels below 50 ppm (or the applicable cleanup standard for solid surfaces). Unlike the class of products discussed earlier in this rule, the PCBs discussed in this section did not originate from contamination resulting from historic manufacturing, use, or recycling activities. Rather, the < 50 ppm concentration levels (or the applicable cleanup standards for solid surfaces) present in these materials are associated with leaks and spills (i.e. improper disposal) of > 50 ppm material. That is, the residual PCBs remain after proper cleanup of a spill of controlled material.

EPA proposed to formally exclude from the TSCA section 6(e) prohibitions on use and distribution in commerce, certain equipment, structures, and other materials that have inadvertently become contaminated with PCBs because of spills from, or proximity to, a PCB Item with PCB concentrations greater than 50 ppm provided that these materials were decontaminated to the specified level below 50 ppm PCBs in accordance with applicable EPA PCB cleanup policies at the time of decontamination. Spills in this case must not have been the result of any intentional discharge of PCBs, and the contamination must be attributable to PCB Items and activities which are themselves authorized.

The proposal also excluded from regulation the PCB use prohibition on materials or equipment which became contaminated with PCBs prior to the effective date of the section 6(e) bans and which have not undergone decontamination under any EPA PCB cleanup policy. However, these materials would have to be decontaminated according to current PCB cleanup policies set forth in EPA's nationwide spill cleanup policy.

The proposal was not intended to act as an alternative to the reclassification provision in 40 CFR Part 761 for PCB Equipment, PCB Articles, or other PCB Items containing PCBs. The availability of decontamination as a means of allowing the further use and distribution in commerce of PCB Items is limited to the decontamination procedures specified in 40 CFR 761.79 for PCB Containers and movable equipment in storage areas. The July, 1987 proposal was intended to merely codify an existing (though not specifically authorized) practice.

Two commentors agreed with the proposal to allow the distribution in commerce and processing of equipment and other materials that are adequately decontaminated in accordance with spill cleanup policies. One commentor objected to the terms of the proposal in codified § 761.20(c)(5) arguing that it could be construed to apply even to the metalworking, machining, or similar equipment in which used oil with under 50 ppm PCBs is used.

As stated above, this exclusion addresses equipment, structures, and other materials that have inadvertently become contaminated with PCBs > 50 ppm as a result of a spill and have subsequently been decontaminated according to the appropriate spill cleanup procedures at the time of decontamination. The proposed language in § 761.20(c)(5) does not clearly set forth the Agency's intention that equipment, structures, and other materials covered by this exception are those which have inadvertently become contaminated with PCBs above 50 ppm because of spills from, or proximity to, a PCB Item whose use was authorized. Section 761.20(c)(5) has been modified to be consistent with this intent.

Since the promulgation of EPA's nationwide PCB Spill Cleanup Policy (52 FR 10588), specific cleanup levels have been established for different types of spills according to the PCB concentration involved in the spill, the type of material contaminated, and the spill location. Spills of less than 50 ppm PCBs are not covered under this policy.

In establishing this cleanup policy for typical PCB spills, EPA recognized that the risks posed by spills of PCBs vary, depending upon spill location and the amount of PCBs spilled. The PCB cleanup policy requires cleanup of PCBs to different levels depending upon spill location, the potential for exposure to residual PCBs remaining after cleanup, the concentration of the PCBs initially spilled and the nature and size of the population potentially at risk of exposure. Thus, this cleanup policy applies the most stringent requirements for spill cleanup to areas where there is the greatest potential for human exposures to spilled PCBs. Implicitly, the further use, processing, and distribution in commerce of materials decontaminated in accordance with the provisions of the nationwide cleanup policy will not present an unreasonable risk.

Since the effective date of the nationwide cleanup policy (May 4, 1987), the provisions of the policy have superseded the regional policies previously in effect. This amendment, of course, excludes from regulation eligible materials already decontaminated in conformity with regional policies prior to that date.

IV. Rulemaking Record

In accordance with the requirements of section 19(a)(3) of TSCA, EPA is issuing the following list of documents, which constitutes the record of this final rulemaking. This record includes basic information considered by the Agency in developing this final rule, including appropriate Federal Register notices, published and unpublished reports, economic and exposure analyses, and various communications before the final rule was issued. A full list of these materials will be available on request from EPA's TSCA Assistance office listed under "FOR FURTHER INFORMATION CONTACT." However, any Confidential Business Information (CBI) that is part of the record for this rulemaking is not available for public review. A public version of the record from which CBI has been deleted, is available for inspection.

A. Previous Rulemaking Records

(1) Official Rulemaking Record from "Polychlorinated Biphenyls (PCBs): Disposal and Marking Rule." Docket No. OPTS–68005, 43 FR 7150, February 17, 1978.

(2) Official Rulemaking Record from "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions Rule." 44 FR 31514, May 31, 1979.

(3) Official Rulemaking Record from "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Use in Electrical Equipment." Docket No. OPTS–62015, 47 FR 37342, August 25, 1982.

(4) Official Rulemaking Record from "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Use in Closed and Controlled Waste Manufacturing Processes." Docket No. OPTS–62017, 47 FR 40980, October 21, 1982.

(5) Official Rulemaking Record from "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions; Amendment to Use Authorization for PCB Railroad Transformers." Docket No. OPTS–62020, 48 FR 124, January 3, 1983.

(6) Official Rulemaking Record for "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Response to Individual and Class Petitions for Exemption." Docket No. OPTS–66006A, 49 FR 28154, July 10, 1984.

(7) Official Rulemaking Record from "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Exclusions, Exemptions, and Use Authorizations." Docket No. OPTS–62032A, 49 FR 28172, July 10, 1984.

(8) Official Rulemaking Record from "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions; Use in Electrical Transformers." Docket No. OPTS–62035D, 50 FR 29170, July 17, 1985.

(9) Official Rulemaking Record from "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Response to Exemption Petitions." Docket No. OPTS–66008E, 51 FR 28556, August 6, 1986.

B. Federal Register Notices

(10) 46 FR 27617, May 20, 1981, USEPA, "Polychlorinated Biphenyls (PCBs): Manufacture of PCBs in Concentrations Below Fifty Parts Per Million: Possible Exclusion from Manufacturing Prohibition: Advance Notice of Proposed Rulemaking."

(11) 44 FR 31514, May 31, 1979, USEPA, "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions."

(12) 44 FR 53438, September 13, 1979, USEPA, "Criteria for Classification of Solid Waste Disposal Facilities and Practices."

(13) 47 FR 47980, October 21, 1982, USEPA, "Polychlorianted Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Use in Closed and Controlled Waste Manufacturing Processes."

(14) 47 FR 52066, November 18, 1982, USEPA, "Pulp, Paper, and Paperboard Point Source Category Effluent Limitations Guidelines and New Source Performance Standards; Proposed Rule."

(15) 48 FR 55076, December 8, 1983, USEPA, "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Exclusions, Exemptions, and Use Authorizations: Proposed Rule."

(16) 49 FR 28172, July 10, 1984, USEPA, "Polychlorinated Biphenyls (PCBS): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Exclusions, Exemptions, and Use Authorizations: Final Rule."

(17) 49 FR 28154, July 10, 1984, USEPA, "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Response to Individual and Class Petitions for Exemptions."

(18) 50 FR 19170, July 17, 1985, USEPA, "Polychlorinated Biphenyls in Electrical Transformers: Final Rule."

(19) 50 FR 49212, November 29, 1985, USEPA, "Hazardous Waste Management System: Recycled Used Oil Standards: Proposed Rule."

(20) 50 FR 49258, November 29, 1985, USEPA, "Hazardous Waste Management System; General,

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Identification and Listing of Hazardous Waste: Used Oil; Proposed Rule."

(21) 50 FR 49164, November 29, 1985, USEPA, "Hazardous Waste Management System: Burning of Waste Fuel and Used Oil Fuel in Boilers and Industrial Furnaces."

(22) 51 FR 28556, August 8, 1986, USEPA, "Polychlorinated Biphenyls (PCBs): Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions: Response to Exemption Petitions."

(23) 51 FR 41900, November 19, 1986, USEPA, "Identification and Listing of Hazardous Waste: Used Oil: Notice Announcing Decision Not To Adopt Proposed Rule Listing Used Oil as a Hazardous Waste.

(24) 52 FR 10688, April 2, 1987, USEPA, "Polychlorinated Biphenyls Spill Cleanup Policy."

(25) 52 FR 25838, July 8, 1987, USEPA, "Polychlorinated Biphenyls: Exclusions, Exemptions and Use Authorizations; Proposed Rule."

C. Support Documents

(26) August 7, 1986 Settlement Agreement filed with United States Court of Appeals for the District of Columbia Circuit, in Docket Nos. 84-1431 and 85-1118.

(27) USEPA, OPTS, EED, Versar, Inc., "Assessment of Exposures Resulting from Recycle/Reuse of Used Oil Containing PCBs at Levels Less Than 50 PPM" (January, 1987).

(28) USEPA, OPTS, ETD, Putnam, Hayes and Barlett, Inc., "PCB Rule Revision, Cost Effectiveness Analyses and Estimates of Exposed Population" (March, 1987).

(29) USEPA, OTS Versar, Inc., "Development of a Study Plan for Definition of PCBs Usage, Wastes, and Potential Substitution in the Investment Casting Industry." (January, 1976).

(30) USEPA, OPTS, ETD, ICF, Inc. "Costs of Prohibiting Reclaimed Investment Casting Wax Containing PCBs below 50 PPM" (DRAFT) (September, 1985).

(31) USEPA, OPTS, EED, US Congress House of Reps., January 17, 1985 letter from Honorable Ralph Regula to William Prendergast, EPA, forwarding January 10, 1985 letter from constituent, Charles LeBeau, Cambridge Mill Products, Inc.

(32) USEPA, OPTS, EED, Letter from John A. Moore, EPA to Honorable Ralph S. Regula (January 3, 1985).

(33) USEPA, OPTS, EED, "Potential PCDF Formation during Combustion of Used Oil Containing Low Levels of PCBs."

(34) USEPA, OPTS, EED, "Exposure Estimates for the Amendment to the PCB Regulation." (November 20, 1986).

(35) USEPA, OPTS, EED, "Exposure Estimates for the Amendment to the PCB Regulation" (December 23, 1986).

(36) USEPA, OPTS, EED, "A Manual for the Preparation of Engineering Assessments" (September 1, 1984).

(37) USEPA, OPTS, EED, Letter from C. Nelson Schlatter, Edmont Corporation to Dr. John Moore, EPA (October 15, 1984).

(38) USEPA, OPTS, EED, Letter from Dr. John A. Moore, EPA to C. Nelson Schlatter, Edmont Corporation (November 15, 1984).

(39) USEPA, OPTS, EED, Letter from Oswald Schindler, Intermarket Latex Inc. to Martin Halper, EPA (November 13, 1984).

(40) USEPA, OPTS, ETD, "Addendum to the Heat Transfer and Hydraulic Systems RIA" (undated).

(41) USEPA, OPTS, ETD, "PCB Glove Requirement Costs: Present Value" (February, 1987).

(42) USEPA, OW, PCB Information Survey, deink Direct Dischargers by Region and NPDES Permit Numbers (November, 1984).

(43) USEPA, OPTS, EED, Letter from Richard S. Wasserstrom, American Paper Institute, Inc. to Alan Carpien, EPA (October 11, 1984).

(44) USEPA, OPTS, EED, Letter from Richard J. Kissel, Attorney for ADCI and OMC to John A. Moore, EPA (October 24, 1984).

(45) USEPA, OPTS, EED, Letter from Alan Carpien, EPA to Richard J. Kissel, Attorney for ADCI and OMC (November 20, 1984).

(46) USEPA, OPTS, EED, Letter from Timothy S. Hardy, Attorney for CMA to Alan Carpien, EPA (November 27, 1984).

(47) USEPA, OPTS, EED, Letter from Richard S. Wasserstrom, API to Alan Carpien, EPA (August 20, 1985).

(48) USEPA, OPTS, EED, letter from Timothy S. Hardy, Attorney for CMA, to Alan Carpien, EPA (August 28, 1985).

(49) USEPA, OPTS, EED, Letter from Jeffrey C. Fort, Attorney for ADCI and OMC to Alan Carpien, EPA (November 22, 1985).

(50) USEPA, OPTS, EED, Letter From Suzanne Rudzinski, EPA to Timothy S. Hardy, Attorney for CMA (January 21, 1986).

(51) USEPA, OPTS, EED, Letter from Robert J. Fensterheim, CMA to Suzanne Rudzinski, EPA (March 19, 1985).

(52) USEPA, OPTS, EED, Letter from Robert J. Fensterheim, CMA to Suzanne Rudzinski, EPA, June 17, 1985).

(53) USEPA, OPTS, EED, Letter from Suzanne Rudzinski, EPA to Robert J. Fensterheim, CMA (July 17, 1985).

(54) USEPA, OPTS, EED, Letter from Toni K. Allen, Attorney for USWAG, to Lee M. Thomas, Administrator, EPA (August 12, 1986).

(55) USEPA, OPTS, EED, Letter from John A. Moore, EPA to Toni K. Allen, Attorney for USWAG (September 9, 1986).

(56) USEPA, OPTS, EED, Letter from Suzanne Rudzinski, EPA to George Fekete, Jr., Pennwalt Corporation (October 22, 1986).

(57) USEPA, OPTS, EED, Letter to Suzanne Rudzinski, EPA from Paulette Vest, Vest Metal Company (October 22, 1986).

(58) USEPA, OPTS, EED, Letter from Suzanne Rudzinski and John J. Neylan III, EPA to Lt General Vincent M. Russo, Defense Logistics Agency (August 28, 1986).

(59) NIOSH (1977), Criteria for recommended standard . . . occupational exposure to polychlorinated biphenyls (PCBs), U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, DHEW (NIOSH) Publication No. 77-225.

(60) USEPA, OSW, List of Facilities Who Burn Waste Fuel—Data Request for OPPI/EMS (August 10, 1987).

(61) Lake Michigan Toxic Pollutant Control/Reduction Strategy (Final Draft), May 9, 1986.

(62) USEPA, OW, Development Document for Proposed Effluent Limitation Guidelines and Standards for Control of Polychlorinated Biphenyls in the Deink Subcategory of the Pulp, Paper, and Paperboard Point Source Category (October, 1982).

(63) USEPA, Environmental Monitoring and Support Laboratory, Cincinnati, OH, "Test Method—The Determination of Polychlorinated Biphenyls in Transformer Fluid and Waste Oils" (September 1982).

(64) USEPA, OSW, TAB, Letter from Alvia Gaskill, RTI to Denise A. Zabinski, EPA (November 5, 1987).

(65) USEPA, OSW, "A Risk Assessment of Waste Oil Burning in Boilers and Space Heaters" (January 1984).

(66) USEPA, OSW, EAB, Temple, Barker and Sloane, Inc., "Background Document: Regulatory Impact Analysis of Proposed Standards for the Management of Used Oil" (November 1985).

(67) USEPA, OAQPS, "Waste Oil Combustion Cancer Risk Assessment" (October 1987).

(68) USDOJ/US Court of Appeals, Letter from I.J. Grishaw to C.A. Fisher (August 8, 1986).

(69) USEPA, OPTS, EED, Memo to Rulemaking Record from R. La Shere re: Meeting with W. Gendreau of Pioneer Fuel (September 10, 1987).

(70) USEPA, OPTS, EED, Letter from D.M. Kechner, EPA to Mark Van Putten, National Wildlife Federation (September 11, 1987).

(71) USEPA, OPTS, EED, Memo to Rulemaking Record from June Kim, "1984 Survey of State and Regional Permitting Personnel Concerning Limitations on PCB Discharges by Deinking Mills." (October 22, 1987).

(72) USEPA, OW, ITD, Memo from Wendy Smith, to Tom Simons, EED, OPTS, USEPA re: Office of Water Information for Amendments to Uncontrolled Rule (January, 1988).

(73) Ft. Howard Paper Company, Copies of Discharge Monitoring Report Forms for Ft. Howard Paper Company in Muskogee, OK, from January 1985 to May 1987.

(74) Ft. Howard Paper Company, Whole Fish Tissue PCB Study, Ft. Howard Corporation, Muskogee, OK, NPDES Permit No. OK 0034321, Final Report (December 10, 1987).

(75) Ft. Howard Paper Company, Expired and Current NPDES Discharge Permits for Ft. Howard Paper Corporation, Muskogee, OK.

(76) State of Wisconsin, Dept. of Natural Resources, Ft. Howard Paper Company, Green Bay, WI, NPDES Discharge Monitoring from January 1982 to October 1987, WPDES Permit # WI-0001848.

(77) USEPA, ORD, OHEA, Drinking Water Criteria Document for Polychlorinated Biphenyls (PCB's) May, 1987, Prepared for ODW, USEPA ECOA-CIN-414.

(78) USEPA, Region VIII, Comments on the Draft Final Regulation, Titled Polychlorinated Biphenyls; Exclusions, Exemptions, and Use Authorizations Including Information on Startup of Coal Fired Power Plants (March 15, 1988).

(79) USEPA, OTS, EED,CRB, Response to Comments on the Notice of Proposed Rulemaking for Amendments to the Uncontrolled PCB Rule (June 1988).

(80) USEPA, OW, EGD, Development Document for Effluent Limitations Guidelines and Standards for the Pulp, Paper, and Paper Board and the Builders' Paper and Board Mills, Point Source Categories, EPA 440/1-82/025, October 1982.

(81) EPA, OTS, Guidance for Conversion of Water Discharge Concentration-based Standards to Mass Based Limitations for PCBs under TSCA (May 1988).

V. Other Regulatory Requirements

A. Executive Order 12291

Under Executive Order 12291 issued February 17, 1982, EPA must judge whether a rule is a "major rule," and therefore, subject to the requirement that a Regulatory Impact Analysis be prepared. EPA has determined that this final rule is not a "major rule" because it does not meet the criteria set forth in section 1(b) of the Executive Order.

The effect on the economy will be the avoidance of significant costs which would otherwise be incurred if EPA maintained the existing use authorizations for hydraulic and heat transfer systems, which include the Viton glove requirement. Likewise, the rule avoids the substantial costs associated with maintaining existing prohibitions of activities involving products containing low levels (under 50 ppm) of PCB contamination.

No significant increases in prices are expected to occur as a result of this rule. No significant adverse effects are expected on competition, employment, investment, productivity, innovation, or the ability of the United States-based enterprises to compete with foreign-based enterprises.

This rule was submitted to the Office of Management and Budget (OMB) for review as required by Executive Order 12291.

B. Regulatory Flexibility Act

Section 603 of the Regulatory Flexibility Act (the Act) (15 U.S.C. 601 *et seq.*, Pub. L. 96-534, September 19, 1980), requires EPA to prepare and make available for comment a regulatory flexibility analysis in connection with rulemaking. The initial regulatory flexibility analysis described the impact of the proposed rule on small business entities. Section 605(b) of the Act "shall not apply to any proposed or final rule if the Agency certifies that the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities."

In accordance with section 605(b) of the Act, EPA certifies that this rule will not have a significant impact on a substantial number of small businesses. The rule is, in fact, nondiscriminatory in its impact on business entities, and the impact on all business entities is generally to exclude from regulation activities currently prohibited under TSCA section 6(e), and not previously authorized, exempted, or excluded by regulation. Small businesses will share equally in the benefits of this rule, including the elimination of the Viton glove requirement in the use authorization for hydraulic and heat transfer systems, and the general exclusion for products contaminated with PCBs at levels below 50 ppm. Any impact on small business entities is not appreciably greater than the impact already being borne by these entities under the existing prohibition on burning offspecification used oil in nonindustrial boilers. This rule will implement the limited restrictions on burning PCB-containing used oil (under 50 ppm) in a manner such that any additional economic burdens will be borne primarily by the marketers of the used oil.

C. Paperwork Reduction Act

The Paperwork Reduction Act of 1980, 44 U.S.C. 3501 *et seq.*, authorizes the Director of OMB to review certain information collection requests by Federal agencies. Under OMB Control Number 2070-0008, OMB has approved an information collection request submitted by EPA in connection with the recordkeeping and reporting requirements which facilitate the implementation and enforcement of the Uncontrolled PCBs Rule. Further, under OMB Control Number 2050-0047, OMB has approved the information collection requirements (including invoice shipping papers, certifications, and used oil analysis) which facilitate the implementation of the prohibition on burning certain used oil fuels in nonindustrial boilers. OMB has also approved the provisions of this final rule, which requires that information related to PCBs in used oil fuels be added to the existing information collections previously approved by OMB.

List of Subjects in 40 CFR Part 761

Environmental protection, Hazardous materials, Labeling, Polychlorinated biphenyls, Reporting and Recordkeeping requirements.

Dated: June 8, 1988.

Lee M. Thomas,

Administrator.

Therefore, 40 CFR Part 761 is amended as follows:

PART 761—[AMENDED]

1. The authority citation for Part 761 continues to read as follows:

Authority: 15 U.S.C. 2605, 2607, and 2611; Subpart C also issued under 15 U.S.C. 2614, and 2616.

2. In § 761.1 by adding paragraph (f)(4) to read as follows:

§ 761.1 Applicability.

(f) * * *

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(4) Except as provided in § 761.20 (d) and (e), persons who process, distribute in commerce, or use products containing excluded PCB products as defined in § 761.3, are exempt from the requirements of Subpart B of this Part.

3. In § 761.3 by adding and alphabetically inserting a definition for "Excluded PCB products," "Market/Marketers," and "Quantifiable Level/Level of Detection," and by revising the definitions for "Qualified Incinerator" and "Recycled PCBs" to read as follows:

§ 761.3 Definitions.

• • • • •

"Excluded PCB products" means PCB materials which appear at concentrations less than 50 ppm, including but not limited to:

(1) Non-Aroclor inadvertently generated PCBs as a byproduct or impurity resulting from a chemical manufacturing process.

(2) Products contaminated with Aroclor or other PCB materials from historic PCB uses (investment casting waxes are one example).

(3) Recycled fluids and/or equipment contaminated during use involving the products described in paragraphs (1) and (2) of this definition (heat transfer and hydraulic fluids and equipment and other electrical equipment components and fluids are examples).

(4) Used oils, provided that in the cases of paragraphs (1) through (4) of this definition:

(i) The products or source of the products containing < 50 ppm concentration PCBs were legally manufactured, processed, distributed in commerce, or used before October 1, 1984.

(ii) The products or source of the products containing < 50 ppm concentrations PCBs were legally manufactured, processed, distributed in commerce, or used, i.e., pursuant to authority granted by EPA regulation, by exemption petition, by settlement agreement, or pursuant to other Agency-approved programs;

(iii) The resulting PCB concentration (i.e. below 50 ppm) is not a result of dilution, or leaks and spills of PCBs in concentrations over 50 ppm.

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"Market/Marketers" means the processing or distributing in commerce, or the person who processes or distributes in commerce, used oil fuels to burners or other marketers, and may include the generator of the fuel if it markets the fuel directly to the burner.

• • • • •

"Qualified incinerator" means one of the following:

(1) An incinerator approved under the provisions of § 761.70. Any level of PCB concentration can be destroyed in an incinerator approved under § 761.70.

(2) A high efficiency boiler which complies with the criteria of § 761.60(a)(2)(iii)(A), and for which the operator has given written notice to the appropriate EPA Regional Administrator in accordance with the notification requirements for the burning of mineral oil dielectric fluid under § 761.60(a)(2)(iii)(B).

(3) An incinerator approved under section 3005(c) of the Resource Conservation and Recovery Act (42 U.S.C. 6925(c)) (RCRA).

(4) Industrial furnaces and boilers which are identified in 40 CFR 260.10 and 40 CFR 266.41(b) when operating at their normal operating temperatures (this prohibits feeding fluids, above the level of detection, during either startup or shutdown operations).

"Quantifiable Level/Level of Detection" means 2 micrograms per gram from any resolvable gas chromatographic peak, i.e. 2 ppm.

• • • • •

"Recycled PCBs" means those PCBs which appear in the processing of paper products or asphalt roofing materials from PCB-contaminated raw materials. Processes which recycle PCBs must meet the following requirements:

(1) There are no detectable concentrations of PCBs in asphalt roofing material products leaving the processing site.

(2) The concentration of PCBs in paper products leaving any manufacturing site processing paper products, or in paper products imported into the United States, must have an annual average of less than 25 ppm with a 50 ppm maximum.

(3) The release of PCBs at the point at which emissions are vented to ambient air must be less than 10 ppm.

(4) The amount of Aroclor PCBs added to water discharged from an asphalt roofing processing site must at all times be less than 3 micrograms per liter (μg/L) for total Aroclors (roughly 3 parts per billion (3 ppb)). Water discharges from the processing of paper products must at all times be less than 3 micrograms per liter (μg/1) for total Aroclors (roughly 3 ppb), or comply with the equivalent mass-based limitation.

(5) Disposal of any other process wastes at concentrations of 50 ppm or greater must be in accordance with Subpart D of this part.

4. In § 761.20 by revising paragraph (a) and the introductory text of paragraph (c), and by adding paragraphs (c) (5) and (e), and the OMB control number to read as follows:

§ 761.20 Prohibitions.

• • • • •

(a) No persons may use any PCB, or any PCB Item regardless of concentration, in any manner other tha in a totally enclosed manner within the United States unless authorized under § 761.30, except that:

(1) An authorization is not required t use those PCBs or PCB Items which consist of excluded PCB products as defined in § 761.3.

(2) An authorization is not required t use those PCBs or PCB Items resulting from an excluded manufacturing proce or recycled PCBs as defined in § 761.3, provided all applicable conditions of § 761.1(f) are met.

(3) An authorization is not required t use those PCB Items which contain or whose surfaces have been in contact with excluded PCB products as defined in § 761.3.

(4) An authorization is not required t apply sewage sludges, contaminated with PCBs below 50 ppm, to land when regulated by authorities under the Clea Water Act and the Resource Conservation and Recovery Act.

• • • • •

(c) No persons may process or distribute in commerce any PCB, or any PCB Item regardless of concentration, for use within the United States or for export from the United States without an exemption, except that an exemptio is not required to process or distribute commerce PCBs or PCB Items resulting from an excluded manufacturing proce as defined in § 761.3, or to process or distribute in commerce recycled PCBs defined in § 761.3, or to process or distribute in commerce excluded PCB products as defined in § 761.3, provide that all applicable conditions of § 761.1(f) are met. In addition, the activities described in paragraphs (c) through (5) of this section may also be conducted without an exemption, unde the conditions specified therein.

• • • • •

(5) Equipment, structures, or other materials that were contaminated with PCBs because of spills from, or proximity to, a PCB Item > 50 ppm, and which are not otherwise authorized for use or distribution in commerce under this part, may be distributed in commerce, provided that these materia were decontaminated in accordance with applicable EPA PCB spill cleanup policies in effect at the time of the decontamination or, if not previously decontaminated, at the time of the distribution in commerce.

• • • • •

(e) In addition to any applicable requirements under 40 CFR Part 266, Subpart E, marketers and burners of used oil who market (process or distribute in commerce) for energy recovery, used oil containing any quantifiable level of PCBs are subject to the following requirements:

(1) *Restrictions on marketing.* Used oil containing any quantifiable level of PCBs (2 ppm) may be marketed only to:

(i) Qualified incinerators as defined in 40 CFR 761.3.

(ii) Other marketers identified in 40 CFR 266.41(a)(1).

(iii) Burners identified in 40 CFR 266.41(b). Only burners in the automotive industry may burn used oil generated from automotive sources in used oil-fired space heaters provided the provisions of 40 CFR 266.41(b)(2)(iii) (A), (B) and (C) are met. The Regional Administrator may grant a variance for a boiler that does not meet the 40 CFR 266.41(b) criteria after considering the criteria listed in 40 CFR 260.32 (a) through (f). The applicant must address the relevant criteria contained in 40 CFR 260.32 (a) through (f) in an application to the Regional Administrator.

(2) *Testing of used oil fuel.* Used oil to be burned for energy recovery is presumed to contain quantifiable levels (2 ppm) of PCB unless the marketer obtains analyses (testing) or other information that the used oil fuel does not contain quantifiable levels of PCBs.

(i) The person who first claims that a used oil fuel does not contain quantifiable level (2 ppm) PCB must obtain analyses or other information to support that claim.

(ii) Testing to determine the PCB concentration in used oil may be conducted on individual samples, or in accordance with the testing procedures described in § 761.60(g)(2). However, for purposes of this part, if any PCBs at a concentration of 50 ppm or greater have been added to the container or equipment, then the total container contents must be considered as having a PCB concentration of 50 ppm or greater for purposes of complying with the disposal requirements of this part.

(iii) Other information documenting that the used oil fuel does not contain quantifiable levels (2 ppm) of PCBs may consist of either personal, special knowledge of the source and composition of the used oil, or a certification from the person generating the used oil claiming that the oil contains no detectable PCBs.

(3) *Restrictions on burning.* (i) Used oil containing any quantifiable levels of PCB may be burned for energy recovery only in the combustion facilities identified in paragraph (e)(1) of this section when such facilities are operating at normal operating temperatures (this prohibits feeding these fuels during either startup or shutdown operations). Owners and operators of such facilities are "burners" of used oil fuels.

(ii) Before a burner accepts from a marketer the first shipment of used oil fuel containing detectable PCBs (2 ppm), the burner must provide the marketer a one-time written and signed notice certifying that:

(A) The burner has complied with any notification requirements applicable to "qualified incinerators" (§ 761.3) or to "burners" regulated under 40 CFR Part 266, Subpart E.

(B) The burner will burn the used oil only in a combustion facility identified in paragraph (e)(1) of this section and identify the class of burner he qualifies.

(4) *Recordkeeping requirements.* The following recordkeeping requirements are in addition to the recordkeeping requirements for marketers found in 40 CFR 266.43(b)(6) (i) and (ii), and for burners found in 40 CFR 266.44(e).

(i) *Marketers.* Marketers who first claim that the used oil fuel contains no detectable PCBs must include among the records required by 40 CFR 266.43(b)(6)(i), copies of the analysis or other information documenting his claim, and he must include among the records required by 40 CFR 266.43(b)(6)(ii), a copy of each certification notice received or prepared relating to transactions involving PCB-containing used oil.

(ii) *Burners.* Burners must include among the records required by 40 CFR 266.44(e), a copy of each certification notice required by paragraph (e)(3)(iii) of this section that he sends to a marketer.

(Approved by the office of Management of Budget under OMB control number 2050-0047)

§ 761.30 [Amended]

5. In § 761.30 by removing paragraphs (d) (6) and (7) and paragraphs (e) (6) and (7).

6. In § 761.30, in the introductory text of paragraphs (d) and (e), by revising the reference "paragraphs (d) (1) through (7)" to read "paragraphs (d) (1) through (5)" and the reference "paragraphs (e) (1) through (7)" to read "paragraphs (e) (1) through (5)" respectively.

[FR Doc. 88-14291 Filed 6-24-88; 8:45 am]
BILLING CODE 6560-50-M

Doc. No.: CLEV-000478-1200-11/08/88

UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542-5001

IN REPLY REFER TO:
6280/9
FAC
NOV 08 1988

From: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina 28542-5001
To: Commander, Atlantic Division, Naval Facilities Engineering Command, Norfolk, Virginia 23511-6287 (Code 114)

Subj: EPA POLICY ON RCRA/CERCLA ENFORCEMENT

Encl: (1) EPA Region IV ltr 4WD-SISIB/VW of 20 Oct 88 w/encl

1. We are forwarding the enclosure to keep you abreast of regulatory policies. A central issue is the development of an Interagency Agreement between MCB, EPA, and the State.

2. Request your assistance in providing further NAVFAC guidance as it becomes available on the Interagency Agreement process. Our point of contact is Mr. Bob Alexander, MCB Environmental Engineer, autovon 484-3034.

T. J. Dalzell

T. J. DALZELL
By direction

Copy to:
CMC-LFL
CO, MCAS, NR (Attn: EnvCoord)

Doc No: CLEJ-[illegible]-12.02 -
11/08/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

OCT 20 1988

REF: 4WD-SISIB/VW

Colonel T. J. Dalzell
U. S. Marine Corps
Assistant Chief of Staff
Marine Corps Base
Camp LeJuene, NC 28543-5001

Re: RCRA/CERCLA Enforcement Action Strategy

Dear Colonel Dalzell:

Enclosed is the RCRA/CERCLA enforcement action strategy that Mr. Robert Alexander requested on your behalf on September 29, 1988. The Environmental Protection Agency (EPA) is currently composing Interagency Agreement (IAG) language for contamination remediation at Camp LeJuene. EPA anticipates that an IAG developed for Camp LeJuene will address all sites, both RCRA and CERCLA, which pose a real or potential threat to human health or the environment. EPA is hopeful that the enclosure gives you better insight as to how our RCRA/CERCLA strategy at Camp LeJeune may be implemented.

Sincerely yours,

H. Kirk Lucius, Chief
Site Investigation and Support Branch
Waste Management Division

Enclosure

ENCL: (1)

DOC NO: CLEJ-00546-12.02-
11/08/88

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY RESPONSE

JAN 25 1988

MEMORANDUM

SUBJECT: Enforcement Actions Under RCRA and CERCLA at Federal Facilities

FROM: J. Winston Porter, Assistant Administrator
Office of Solid Waste and Emergency Response

TO: Regional Administrators
Regions I-X

BACKGROUND

Statutory language makes it clear that Federal facilities must comply both procedurally and substantively with RCRA and CERCLA in the same manner as any non-Federal entity. The purpose of this memo is to lay out the statutory authorities under RCRA and CERCLA that EPA may use at Federal facilities to achieve compliance and expeditious cleanup.

Over the past year, a great deal of effort has been spent identifying those enforcement tools that are available to EPA in the hazardous waste programs to achieve a higher level of compliance at Federal facilities. Specifically, the successful negotiation of individual agreements such as the corrective action order with the Department of Energy (DOE) at the Idaho National Engineering Lab and the Interagency agreement with the Department of Army (DOA) at the Twin Cities Army Ammunition Plant demonstrated significant progress in efforts to achieve compliance and cleanup at Federal facilities. Further clarification of EPA's enforcement capabilities at Federal facilities has come from the Department of Justice in Congressional testimony.

To continue the above progress in resolving compliance and cleanup issues at Federal facilities, I am outlining the enforcement and permitting response actions that EPA can currently implement to formalize compliance and cleanup actions

at Federal facilities. A description of the available enforcement and permitting response actions is given for each of the following scenarios.

1) A Federal facility with RCRA compliance issues.

2) A Federal facility with RCRA corrective action issues.

3) A Federal facility with CERCLA issues.

4) A Federal facility with RCRA and CERCLA issues.

I. A FEDERAL FACILITY WITH RCRA COMPLIANCE ISSUES

At a Congressional hearing on April 28, 1987 before the House Oversight and Investigation Sub-Committee, of the Committee on Energy and Commerce, the U.S. Department of Justice testified that EPA may not issue Administrative Orders at Federal facilities under Section 3008(a) of RCRA to address compliance violations of regulatory requirements. (See Attachment 1 for a copy of DOJ's Congressional testimony). When addressing RCRA compliance violations, EPA will issue the Federal facility a Notice of Noncompliance (NON). EPA will then negotiate a Federal Facility Compliance Agreement (FFCA) to resolve the compliance issues outlined in the NON. Detailed below is a description of the components of a NON and a FFCA.

A. Federal Facility Notice of Noncompliance

EPA will issue a Notice of Noncompliance (NON) as the initial enforcement action at a Federal facility with RCRA compliance violations. The notice should be sent to the responsible Federal official at the facility, or their delegate. The issuance of a NON at a Federal facility is parallel to the issuance of a RCRA Section 3008(a) administrative complaint to a private facility and, therefore, must conform with a RCRA Section 3008(a) complaint in content and format. As outlined in the model language (Attachment 2), the NON should contain the following components:

1) A general reference to the Resource Conservation and Recovery Act as amended.

2) The factual basis for the issuance of the NON (e.g., acts, omissions and conditions identified during an inspection).

3) A reference to the waiver of sovereign immunity under Section 6001 of RCRA.

4) A reference to the citizen suit provisions of Section 7002 of RCRA.

5) A reference to administrative, civil, and/or criminal sanctions under Section 3008 of RCRA that may be applied to an individual who is in charge of hazardous waste management activities at a facility.

6) A detailed allegation of all RCRA violations with citations to authorized state or EPA regulations.

7) A detailed compliance schedule (both actions and timeframes) for the correction of violations.

8) The alternatives to the actions provided for in the NON (e.g., Presidential exemption or specific legislative relief from Congress).

9) A specific date or timeframe by which the Federal facility must provide a written response to EPA regarding their plans for addressing the violations outlined in the document and/or a specific date for a conference.

It is essential that the NON specify the violations, remedy, and timeframes for implementing the remedy in the same manner that a strong administrative or civil complaint would be drafted.

B. Federal Facility Compliance Agreement

After the NON has been issued, the final negotiated document resolving compliance violations between the Federal facility and EPA will continue to be called a Federal Facility Compliance Agreement (FFCA). A very important section in any new FFCA is the enforceability clause. Model enforceability language is attached (Attachment 3) for your inclusion in any new FFCA. Where appropriate, and when you can obtain expeditious agreement from the affected Federal facility, you should add the enforeability clause to existing Federal Facility Compliance Agreements as well. This language reflects EPA's view that a "requirement" in Section 7002 includes statutory and regulatory requirements and other items which are mandated by these requirements (e.g., schedules of compliance, various plans, recordkeeping and reporting) and that this final negotiated document is enforceable under Section 7002. This language also recognizes that under RCRA Section 6001, Federal agencies are required to comply with the agreement, subject to available appropriations.

All FFCAs should contain the model dispute resolution clause found at Attachment 4. This dispute resolution language emphasizes resolution of disputes at a lower level. In cases where disputes are escalated to higher levels, the EPA Administrator is the final decision maker.

C. Issuance of RCRA Section 3008(a) Order to a Government-Owned Contractor Operated Facility (GOCO)

When addressing RCRA compliance issues at a Federal facility, EPA also has the option of issuing an enforcement action against the non-Federal operator of a facility. In many cases, contractors have the operational responsibility for waste generation and management operations at a Federal facility.

At the aforementioned Congressional hearing on this topic, DOJ stated that they saw no constitutional or statutory problems to asserting Section 3008 authority (or any other authority) against contract operators of government-owned facilities (GOCOs)(see Attachment I, DOJ Testimony). This means that EPA and the states have the full range of enforcement authorities under RCRA and CERCLA at GOCOs that are available for private facilities.

Actions against GOCOs can be valuable enforcement tools, especially at facilities where the contractor does the majority of the waste management work (i.e., DOE facilities). On a factual basis EPA has not experienced trouble establishing the contractor as the operator. The Mixed Energy Waste (MEWS) task force found that at most of the major DOE facilities the contractor(s) were responsible for the day-to-day operations and long term management, or oversight of hazardous waste at the facility. In some instances, both the Federal agency and the contractor(s) are the operators. A memo labeled Attachment 5 in this package gives some criteria for determining the operator at a Federal facility.

GOCOs are not shielded from enforcement actions for non-compliance with environmental laws. Therefore, I strongly encourage you to determine who is the operator of hazardous waste management activities at a Federal facility when developing an enforcement strategy at the facility. You should then examine the factual association of the contractor at the facility. When the primary operator at a Federal facility is clearly the contractor(s), and the factual basis for the enforcement action is clearly defined, you should consider the use of all RCRA and CERCLA authorities available for non-Federal facility actions. The Federal Facilities Compliance Task Force in the Office of Waste Programs Enforcement and the Office of Enforcement and

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Compliance Monitoring will be working with your staff to identify those cases which may be good candidates for a GOCO enforcement action.

II. A FEDERAL FACILITY WITH RCRA CORRECTIVE ACTION ISSUES

A. Corrective Action Orders (3008(h)) at Federal Facilities

With regard to corrective action and the applicability of administrative orders under RCRA Section 3008(h) at Federal facilities, DOJ has taken the view that corrective action orders are integral to the permitting process. Since Section 6001 of RCRA expressly requires Federal facilities to comply with hazardous waste permits, DOJ has concluded that administrative orders under Section 3008(h) can be issued to Federal facilities.

Based on this DOJ determination, Section 3008(h) administrative orders should be issued whenever possible and appropriate (e.g., an interim status facility which is not seeking a RCRA permit or the issuance of the permit is not expected in the near future). The existing administrative procedures for issuing RCRA 3008(h) orders, as set forth in the February 19, 1987 memorandum to the regional offices, will be applied to Federal agencies. However, Federal agencies will have the opportunity to elevate disputes to the Administrator for a final decision in the event a dispute cannot be resolved at the Regional Administrator level. Consistent with these procedures, EPA will issue orders as necessary, and provide a reasonable opportunity for Federal agencies to discuss the order with EPA. If the Federal agency chooses not to invoke these procedures, the order becomes final and effective.

As in the NON and FFCA, a Section 3008(h) order being issued to a Federal facility should state the waiver of sovereign immunity found in Section 6001 of RCRA. It should also contain the model dispute resolution language found in Attachment 4. The the model enforceability language found in Attachment 3 is not necessary since the order will explicitly cite the statutory authority in Section 3008(h), and is, therefore, enforceable under Section 7002 of RCRA. There should be no difference in the factual basis for the issuance of a corrective action order between a private facility and a Federal facility. The initial order should be sent to the responsible Federal official at the facility, or their delegate.

B. Issuance of a 3008(h) Order to a Government-Owned Contractor-Operated Facility (GOCO)

As described in Part III, RCRA Compliance, Section C, DOJ has determined that EPA has the authority to exercise all of its Section 3008 enforcement options at GOCOs. This authority is not limited to RCRA compliance issues under Section 3008(a). It includes corrective action authorities under Section 3008(h) and Section 3013 of RCRA. All CERCLA enforcement authorities apply to GOCOs as well.

III. A FEDERAL FACILITY WITH CERCLA COMPLIANCE ISSUES

A. Section 120 Interagency Agreements

Under Section 120 of the Comprehensive Environmental Response Compensation and Liability Act as amended by the Superfund Amendments and Reauthorization Act (hereinafter referred to as CERCLA), Federal agencies must enter into an "interagency" agreement (IAG) for all necessary remedial actions at Federal facilities on the NPL.

The Agency is viewing the Section 120 Interagency agreement as a comprehensive document to address hazardous substance response activities at a Federal facility from the remedial investigation/ feasibility study (RI/FS) through the implementation of the remedial action. All such interagency agreements must comply with the public participation requirements of Section 117. The timetables and deadlines associated with the RI/FS and all terms and conditions associated with the remedial actions (including operable units or interim actions) are enforceable by citizens and the States through the citizen suit provisions of Section 310 of CERCLA. In addition, Section 122(l) of CERCLA authorizes the imposition of civil penalties against Federal agencies for failure to comply with interagency agreements under Section 120. Procedures for imposing these penalties are provided for in Section 109 of CERCLA.

B. Other CERCLA Authorities Available at Federal Facilities

EPA has the authority to issue administrative orders to Federal agencies under Section 104 and Section 106 of CERCLA. Section 106 orders should be used where needed to assure compliance with Federal facility requirements for response action. Orders under Section 104(e)(5)(A) of CERCLA can be used to collect information and obtain access to Federal agency sites where needed.

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Executive Order 12580 clarifies that EPA is authorized to issue Section 104 and Section 106 administrative orders to other Federal agencies, with the concurrence of the Department of Justice. Section 4(e) of the Executive Order provides that:

> Notwithstanding any other provision of this Order, the authority under Section 104(e)(5)(A) and Section 106(a) of the Act to seek information, entry, inspection, samples or response action from Executive Departments and agencies may be exercised only with the concurrence of the Attorney General.

CERCLA enforcement authorities under Section 106, both administrative and judicial, can be used against government contractors at Federal facilities. Administrative orders against contractors do not require concurrence of the Department of Justice. In addition, Section 120(e)(6) provides that, if the Administrator determines that the response actions can be done properly at the Federal facility by another responsible party, then the Administrator may enter into an agreement with such party under the settlement provisions of Section 122 of the statute. Following the approval by the Attorney General of any such agreement relating to a remedial action, the agreement will be entered in the appropriate United States district court as a consent decree under Section 106 of CERCLA.

States also have a variety of enforcement authorities under CERCLA, so the exercise of EPA's enforcement authorities should be closely coordinated with the States. First, Section 121(e)(2) of CERCLA authorizes States to enforce any Federal or state standard, requirement, criteria or limitation to which the remedial action must conform under CERCLA. Second, Section 310 authorizes citizen suits to require Federal agencies to comply with the standards, regulations, conditions, requirements, or orders which have become effective pursuant to CERCLA including IAGs under Section 120 of the Act. Third, Section 120(a)(4) clarifies that State laws concerning removal and remedial action, including State laws regarding enforcement, are applicable at Federal facilities not included on the NPL. In addition, Section 120(i) states that nothing in CERCLA Section 120 shall affect or impair the obligation of the Federal agency to comply with the requirements of RCRA, including corrective action requirements (see section IV.C., "Importance of the States as a Party to the IAG"). EPA enforcement actions against Federal agencies should therefore be carefully coordinated with States, to avoid potentially duplicative or conflicting exercises of authority.

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IV. A FEDERAL FACILITY WITH CERCLA AND RCRA ISSUES

In many cases, facilities subject to an IAG will also have RCRA liabilities. The most common example of the RCRA/CERCLA overlap is where a unit(s) at the facility has interim status or a permit under RCRA and a portion of the facility is undergoing a CERCLA remedial investigation.

A. Enforcement Options

When developing a comprehensive strategy for addressing both RCRA and CERCLA issues at a Federal facility, EPA and the states should consider the following options, alone or in combination, as possible mechanisms for getting enforceable requirements in place:

1. A RCRA permit

All RCRA Subtitle C permits issued after November 8, 1984, will contain provisions for implementing the corrective action requirements of 40 CFR Part 264 Subpart F (or authorized state requirements), and Section 3004(u) and (v) of RCRA. For facilities that have or are seeking a RCRA permit, the requirements for a "CERCLA" remedial investigation and cleanup could be met by implementing these requirements through RCRA corrective action. It is important to keep in mind, however, that the extent of coverage of the RCRA permit is generally limited to hazardous wastes/constituents (e.g., some CERCLA hazardous substances such as radionuclides are not RCRA hazardous constituents and, therefore, the permit may not be able to address all of the releases at a facility).

2. A RCRA Corrective Action Order

The corrective action authority under Section 3008(h) of RCRA can be used at RCRA interim status facilities to address releases from RCRA regulated units and other solid waste management units. At a Federal facility that has interim status, a RCRA corrective action order could address the investigation and clean-up of releases in lieu of a "CERCLA" response action or as an interim measure. (Again, the extent of coverage in the RCRA corrective action order is limited to RCRA hazardous wastes/constituents.)

3. Imminent and Substantial Endangerment Orders

CERCLA Section 106 can be used to address releases from RCRA units or CERCLA sites when an "imminent and substantial endangerment" is shown.

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4. An Interagency Agreement under Section 120 of CERCLA

A Section 120 IAG could be drafted to incorporate all RCRA corrective action requirements and CERCLA statutory requirements. Where some or all of a Federal installation has been listed on the NPL, the CERCLA Section 120 IAG is required for remedial action by statute.

The first agreement under Section 120 of CERCLA (IAG) was finalized on August 12, 1987. The IAG at Twin Cities Army Ammunition Plant (TCAAP) is a three party agreement between EPA, the State of Minnesota, and the U.S. Department of the Army. Several notable provisions that should be incorporated in every CERCLA Section 120 IAG include a dispute resolution process that denotes the EPA Administrator as the final decision maker, an enforceability clause which states that provisions of the agreement are enforceable by citizens and the State through the citizen suit provision of Section 310 of CERCLA, and a means for resolving both the RCRA and CERCLA requirements when both statutes apply. Further guidance on CERCLA Section 120 agreements is being developed and will be made available to the Regions as soon as possible. In the interim, the Regions should consult with Headquarters on any IAG issues they encounter.

B. Strategy for Action at RCRA/CERCLA Sites

The decision on which of the above mechanisms to employ at a Federal facility will be made on a facility specific basis. However, if the Federal facility is on the NPL or is likely to be placed on the NPL, I encourage the use of a Section 120 IAG to incorporate both RCRA and CERCLA activities under one enforceable agreement and to serve as a comprehensive plan for investigatory and remedial activities at the facility, whether RCRA or CERCLA. EPA, the State, and the Federal facility would agree on a facility wide strategy, setting priorities and schedules for action. If properly framed, the agreement would satisfy the facility's RCRA corrective action requirements,as well as the public participation requirements of Section 117 of CERCLA and Part 124 of RCRA. At a later date, if appropriate, corrective/ remedial action requirements found in the IAG could be incorporated into the RCRA permit for those facilities seeking an operating or post-closure permit, in satisfaction of RCRA Section 3004(u) and (v) requirements. An Interagency agreement under Section 120 of CERCLA does not serve as the replacement for a RCRA permit at a unit seeking an operating permit.

C. Importance of the State as a Party to the IAG

CERCLA Section 120(i) states that nothing in CERCLA Section 120 shall affect or impair the obligation of the Federal agency to comply with the requirements of RCRA, "including the corrective action requirements." One interpretation of CERCLA

Section 120(i) is that the provision allows "re-cleanup" of a release using RCRA corrective action authorities during or after a cleanup of that release under CERCLA; this could be a problem if a State, authorized to implement the RCRA program, contested the technical standards of an IAG. In order to avoid arguments over the interpretation of Section 120(i), as well as to avoid potentially duplicative exercises of authority, I encourage the inclusion of the State as a full signatory party for IAG's at RCRA facilities.

A three party agreement will ensure the following state roles in the agreement:

- O appropriate application of state clean-up standards
- O public participation requirements
- O enforceability
- O involvement in setting priorities
- O dispute resolution
- O review and comment on technical documents

This type of agreement would resolve differences between EPA and state requirements up front.

CONCLUSION

This memo is the first step in developing an integrated RCRA/CERCLA Federal facility compliance and cleanup strategy. The fundamental principle of the strategy is that there is no difference between environmental standards for Federal facilities and private facilities. EPA holds Federal facilities accountable for environmental cleanup and will proceed with enforcement actions at Federal facilities in the same way that we would proceed at private facilities. Although the limitations of enforcement authorities at Federal facilities have frustrated EPA's enforcement capabilities in the past, the RCRA corrective action requirements in combination with CERCLA authorities under Section 106 and Section 120 provide many options for achieving cleanup at Federal facilities.

I have recently established a Federal Facilities Compliance Task Force within OWPE which is dedicated to achieving compliance and cleanup at Federal facilities. The Task Force will be working closely with the CERCLA Enforcement Division and RCRA Enforcement Division of OWPE, other offices within Headquarters, and the Regions to develop guidance and policy regarding Federal facilities, to resolve difficult issues that arise from EPA's negotiations with Federal facilities, to track ongoing negotiations between EPA and Federal agencies, to pinpoint areas

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for potential enforcement response, and to relay the Agency's efforts at resolving compliance, corrective action and permitting issues at Federal facilities.

I am requesting that you forward any Federal Facility Compliance Agreements, Interagency Agreements, etc., that you are negotiating with Federal facilities in your Region to Gene A. Lucero, Director of the Office of Waste Programs Enforcement (Mail Code: WH-527).

As I mentioned earlier, the Task Force will be working with the Regions to pinpoint areas for possible enforcement action. As DOJ has encouraged EPA to take appropriate enforcement actions at GOCOs, the Task Force is interested in GOCO candidates for an enforcement action under RCRA or CERCLA. I am polling the Regions for suggestions of Federal facilities where the need for an enforcement action is imminent and there is a clear means of establishing the contractor as the operator. We will provide Headquarter's support for the development of the order and throughout the negotiation process.

If you have any questions regarding this memorandum or recommendations of candidates for potential enforcement actions, please contact Christopher Grundler, Director of the Federal Facilities Compliance Task Force at FTS 475-9801. Questions can also be directed to Jacqueline Thiell of the the Task Force at FTS 475-8727.

Attachments

cc:

Gene Lucero, OWPE
Roger Marzulla, DOJ
Henry Longest, OERR
Tom Adams, OECM
Marcia Williams, OSW
Frank Blake, OGC
Richard Sanderson, OFA
Hazardous Waste Management Division Directors, Regions I-X
Regional Counsels, Regions I-X
CERCLA Branch Chiefs, Regions I-X
RCRA Branch Chiefs, Regions I-X
Federal Facility Coordinators

DOC. NO. : CLEJ-00554-12.02-04/08/91

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

APR - 8 1991

4WD-RCRA & FFB

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Commander, Atlantic Division
Naval Facilities Engineering Command
Code 1822
Ms. Laurie A. Boucher, P.E.
Remedial Project Manager MCB Camp Lejeune
Norfolk, Virginia 23511-6287

RE: EPA Environmental Monitoring Data Reporting Requirements

Dear Ms. Boucher:

Your facility is required to report environmental monitoring data from a variety of media to EPA under requirements of CERCLA pursuant to a Section 120 Federal Facility Agreement and a RCRA/HSWA corrective action permit pursuant to Sections 3004(u) & (v). In order to comply with the terms of such Agreements and permits as well as national EPA policies, the Region is establishing minimum requirements for the submission of environmental monitoring data.

The purpose of these requirements are to ensure that all environmental monitoring data reported under RCRA or CERCLA is readily available, reliable and consistent in order for EPA to fulfill its role as regulator and oversite Agency through timely reporting and interpretation of environmental monitoring data. This will enable your facility and EPA to better protect public health and the environment.

The minimum requirements are:

1. All environmental monitoring data shall be submitted to EPA in a consistent format with consistent parameters that will facilitate collection and recording of such data in a computer data-file.

   The data elements reported should meet the specific requirements of the applicable regulatory program(s), field QA/QC procedures, laboratory quality assurance procedures and EPA approved workplans. EPA Region IV has developed a generic computer data-file and export protocol that is recommended for use in meeting this requirement (see enclosure). The enclosed data-file protocol indicates the data elements (fields) that will be required at a minimum by EPA to identify sampling stations.

DOC NO: CLEJ-00557-
12.02-04/08/91

A Data Management Plan should be developed to establish minimum data elements, parameters and formats for all environmental monitoring data submitted to EPA.

2. All environmental monitoring data shall comply with the EPA National Locational Data Policy developed by EPA's Office of Information Resources Management (see enclosure).

The generic data-file and export format has provisions for meeting this requirement (see enclosure).

The above requirements must be complied with by incorporation into all Remedial Investigations (RI) or RCRA Facility Investigation (RFI) workplans and/or Data Management Plans submitted to EPA for review and approval, in accordance with appropriate time tables and deadlines, subsequent to receipt of this letter.

If you have any questions concerning the above requirements please contact Mickey Hartnett, Chief DOD Remedial Unit at (404) 347-3016. If you have specific questions regarding the data-file export protocol please contact Ms. Phyllis Mann at (404) 347-3016.

Sincerely yours,

for Roy A. Gregg

James H. Scarbrough, P.E., Chief
RCRA and Federal Facilities Branch
Waste Management Division

Enclosures

cc: Mr. Jack Butler, NCDEHNR
Ms. Stephanie Del-Re Johnson, MCB Camp Lejeune

EPA LOCATIONAL DATA POLICY

Doc No: CLEJ-00554-
12.02-04/08/91

EPA's Officer of Information Resources Mangement (OIRM) has developed a policy to be adopted by EPA, and its delegates and representatives, for collecting and documenting locational data about the entities tracked under Federal Environmental programs within EPA's juridiction. The policy clearly defines responsibilities for obtaining locational measurements for all facilities, sites and monitoring and observation points of primary interest to EPA. In addition, the policy explicitly specifies latitude and longitude, in an intentionally-compatible format, as the Agency's preferred locational coordinate system. Implementation of this policy will allow Agency data to be intergrated based upon location, thereby promoting enhanced use of EPA's extensive data resources for cross-media environmental analyses and management decisions.

1. PURPOSE. This policy establishes the principles for collecting and documenting latitude/longitude coordinates for facilities, sites and monitoring and observation points regulated or tracked under Federal environmental programs within the jurisdiction of the Environmental Protection Agency (EPA). The intent of this policy is to extend environmental analyses and allow data to be integrated based upon location, thereby promoting the enhanced use of EPA's extensive data resources for cross-medial environmental analyses and management decisions. This policy underscores EPA's commitment to establishing the data infrastructure necessary to enable data sharing and secondary data use.

2. SCOPE AND APPLICABILITY. This policy applies to all Environmental Protection Agency (EPA) organizations and personnel of agents (including contractors and grantees) of EPA who design, develop, compile, operate or maintain EPA information collections developed for environmental program support. The requirements of this policy apply to existing as well as new data collections.

3. BACKGROUND.

   a. Fulfillments of EPA's mission to protect and improve the environment depends upon improvements in cross-programmatic, multi-media data analyses. A need for available and reliable location identification information is a commonality which all regulatory tracking programs share.

b. This policy serves as a framework for collecting and documenting location identification data. It does not include a requirement that a particular level of precision or accuracy be achieved; managers of individual data collection efforts determine the levels precision and accuracy necessary to support their mission. However, this policy does serve as a starting point for acquiring these critical data.

c. To implement this policy, program data managers must collect and document the following:

(1) Latitude/longitude coordinates in accordance with Federal Interagency Coordinating Committee for Digital Cartigraphy (FICCDC) recommendations. The coordinates may be present singly or multiple times, to define a point, line or area, according to the most appropriate data type for the entry being represented.

This format for representing this information is:

+/-DD MM SS.SSSS (latitude)
+/-DDD MM SS.SSSS (longitude)

where:

- Latitude is always presented before longitude
- DD represents degrees of latitude; a digit decimal number ranging from 00 through 90
- DDD represents degrees of longitude; a three digit decimal number ranging from 000 through 180
- MM represents minutes of latitude or longitude, a two-digit decimal number ranging from 00 through 60
- SS.SSSS represents seconds of latitude or longitude, with a format allowing possible precisions to the ten-thousandths of seconds. (actual accuracy to be program and case specific)
- + specifies <u>latitudes north</u> of the equator and <u>logitudes east</u> of the prime meridian
- - speicifies <u>latitudes south</u> of the equator and <u>longitudes west</u> of the prime meridian

DOC NO: GLEJ-00554-12.02-04/08/91

Interchange File Format for Electronic Data Reports

This document establishes, for EPA Region IV, the required format for electronic reporting of monitoring data.

Data will be transported as a set of four ASCII files:

STATION.DAT	-	contains basic information about monitoring station location and type. Detailed description of the structure is contained in appendix A.
WELL.DAT	-	contains detailed information about construction and characteristics of groundwater monitoring stations. See appendix B.
SAMPLE.DAT	-	contains basic information about the collection and characteristics of samples. See appendix C.
PARM.DAT	-	contains measured values and reporting units for specific parameters. See appendix D.

The first line of EACH of the four files MUST contain the following text starting in position one: 19901001

These files are to be transmitted in ASCII format using 5.25 inch flexible disk, nine-track magnetic tape (1600 or 6250 bpi) or, in the future, via communications channels yet to be defined. Hardcopy reporting requirements will continue as currently required until further notice. Additional files may be defined in the future for non-groundwater station types should the need arise.

Several of these files will contain data that is usually static in nature. For example, the basic information contained in STATION.DAT will not normally change for any single station, therefore once the data has been submitted for a particular station, it will not be required to resubmit that information. If, however, the station record is updated or corrected the record would have to be resubmitted. After the initial report then, STATION.DAT would be submitted only when new stations are created, or when an old station record is modified, and need only contain the new or modified records. The same is true of file WELL.DAT. SAMPLE.DAT would, of course, be submitted each time one or more new samples were to be reported, or any sample record required updating. Again, the file need only contain the new or updated records. PARM.DAT is expected to be submitted at each required reporting interval, since it will contain the

DOC NO. OLEM-WSTA-12.02-04/08/91

Appendix A

Datafile STATION.DAT

field no.	field name	field Description
1	STATION_KEY *	Unique station identifier. Consists of a twenty-seve character alphanumeric field, left justified, containing:

column:	description:
1-12	Unique site identifier as assigned by EPA. Must be alphanumeric.
13-17	Unique solid waste management unit designator. Must be alphanumeric.
18	Media status indicator. Must contain one of the following: C - compliance monitoring station B - baseline monitoring station A - other ambient monitoring station.
19 - 27	Unique station identifier. Must be alphanumeric.

If this data is to be used with the Region IV Query menu, the naming convention recomended for stations is as follows. Monitoring wells should contain 'MW',test pits 'TP',boreholes 'BH', surface soil 'SS'.

2	TYPE	*	Type of monitoring station. Consists of a four-character alphanumeric field, left justified, containing one of the following: AIR, SWTR, GWTR, SOIL, SED, and SLDG. The meanings of these abbreviations are as follows: AIR - Air sampling station SWTR - Surface water sampling station GWTR - ground water sampling station SOIL - soil sampling station SED - Stream bed sediment SLDG - process sludge sampling
3	LATITUDE	*	Geographic position of the station in degrees north of the equator. Must be in the format DDMMSS.xxxx, where DD represents degrees, MM represents minutes, and SS.xxxx represents seconds, with available precision to four decimal places.
4	LONGITUDE	*	Geographic position of the station in degrees

* required field

which may not be accomodated in a defined field. Must be ALPANUMERIC consisting of up to 40 characters.

* required field

A - air	M - other mud
B - bentonite	N - none
W - water	O - other fluid

6 DVMTH

Method by which well was developed. Must be ALPHANUMERIC, consisting of a single character. The character must be one of the following:

A - air lift pump	B - bailed
C - compressed air	J - jetted
P - other pump	S - surged
Z - other method	N - none

7 DVHRS

Time in hours during which well was developed. Must be INTEGER NUMERIC, consisting of up to 5 digits.

8 SPLTRT

Any special treatment that was applied during the well development process. Must be ALPHANUMERIC, consisting of a single character, which must be one of the following:

C - chemicals	D - dry ice
E - explosives	F - deflocculant
H - hydrofracturing	M - mechanical
Z - other	N - none

9 LIFT

Type of lift indicator. Must be Alphanumeric, consisting of a single character. The character must be one of the following:

A - air lift	R - rotary pump
B - bucket	S - submersible pump
C - centrifugal pump	T - turbine
J - jet pump	U - unknown
P - Piston pump	Z - other

10 NOSEG

Number of bore hole sections. A bore hole section is defined as a length of bore hole of constant diameter. Bore hole sections are designated numerically from top to bottom of bore hole. INTEGER NUMERIC field containing a value of one or two.

11 SGDIA1

Diameter of first bore hole section, in inches.

12 SGDIA2

Diameter of second bore hole section, in inches.

13 SGDIA3

Diameter of third bore hole section, in inches.

Each of the SGDIAx fields is DECIMAL NUMERIC, containing up to twelve characters (including the

* required field

surface datum.

24 BCELV1 — The depth to the bottom of the first section of casing,in feet.

25 BCELV2 — The depth to the bottom of the second section of casing,in feet.

26 BCELV3 — The depth to the bottom of the third section of casing,in feet.

The BCELVx fields are DECIMAL NUMERIC,each with a maximum of twelve characters (including the decimal point) and may have up to two digits after the decimal point. These depths are measured relative to land surface datum.

27 CIDIA1 — Inside diameter of the first section of casing,in inches.

28 CIDIA2 — Inside diameter of the second section of casing,in inches.

29 CIDIA3 — Inside diameter of the third section of casing,in inches.

The CIDIAx fields are DECIMAL NUMERIC,each with a maximum of twelve characters (including the decimal point) and may have up to two digits after the decimal point.

30 CODIA1 — Outside diameter of the first section of casing, in inches.

31 CODIA2 — Outside diameter of the second section of casing, in inches.

32 CODIA3 — Outside diameter of the third section of casing, in inches.

The CODIAx fields are DECIMAL NUMERIC,each with a maximum of twelve characters (including the decimal point) and may have up to two digits after the decimal point.

33 CMATR1 — Description or name of casing material from which the first section of casing is made.

34 CMATR2 — Description or name of casing material from which the second section of casing is made.

* required field

prevent formation material from entering through the well screen.

42 FPMTH — Indicator for method of filter pack placement. Must be ALPHANUMERIC consisting of a single character. The character must be one of the following:

A - dropping material down the hole and tamping
B - dropping material down hollow-stem auger
T - tremie pipe
O - other

43 FPMAT — Description or name of the material which forms the filter pack. Must be ALPHANUMERIC, consisting of up to eight (8) characters.

44 FPGRN — Grain size of the material which forms the filter pack, in mesh guage. Must be INTEGER NUMERIC, with up to four characters.

45 TFELV — The depth to the top of the filter pack. The TFELV field is DECIMAL NUMERIC with a maximum of twelve characters (including the decimal point) and may have up to two digits after the decimal point. Measured relative to land surface.

46 BFELV — The depth to the bottom of the filter pack. The BFELV field is DECIMAL NUMERIC with a maximum of twelve characters (including the decimal point) and may have up to two digits after the decimal point. Measured relative to land surface.

ANNULAR SEALANT - material used to seal the space between the borehole and the casing of the well. The annular sealant is placed directly above the filter pack to prevent the migration of contaminants to the sampling zone from the surface or intermediate zones and prevent cross contamination between strata.

47 SLMTH — Indicator for method of sealant placement. Must be ALPHANUMERIC consisting of a single character. The character must be one of the following:

A - dropping material down the hole and tamping
B - dropping material down hollow-stem auger
T - tremie pipe
O - other

48 SLMATR — Description or name of the material which forms the seal above the filter pack against entry of surface water. Must be ALPHANUMERIC, consisting of a single

* required field

Appendix B

56	COMMENT	Supplemental information as needed. May contain up to 80 alphanumeric characters.

* required field

Appendix C

4	TIME	*	Time (in military format) of sample collection. INTEGER NUMERIC consisting of four characters.
5	SSTAT	*	Station status or condition. Used primarily for groundwater monitoring stations. ALPHANUMERIC consisting of one character. The character must be one of the following:

D - Dry
O - obstructed
W - Destroyed
F - Flowing
P - Pumping
X - Surficial inflow
Z - other

FIELD MEASUREMENTS

6	TEMP	Sample temperature in degrees Celsius. DECIMAL NUMERIC consisting of six characters (including the decimal) and may have up to two digits after the decimal point.
7	PH	Sample pH in standard units. DECIMAL NUMERIC consisting of four characters (including the decimal) and may have one digit after the decimal point.
8	COND	Specific Conductance in uMhos. INTEGER NUMERIC consisting of a maximum of six characters.
9	TURB	Turbidity. INTEGER NUMERIC consisting of a maximum of eight characters. May be reported in JTU or NTU, as required by program.
10	WLEVEL	Well water level, or stream gage height, in feet. Measured relative to the reference datum. Item is DECIMAL NUMERIC consisting of a maximum of six characters (including the decimal) and may have up to two digits following the decimal point.
11	WINDSP	Wind speed in km/h. DECIMAL NUMERIC consisting of a maximum of six characters (including the decimal), and may have up to two digits after the decimal point.
12	WINDIR	Wind direction in degrees. INTEGER NUMERIC consisting of a maximum of four characters.
13	SAMMETH	Method used to collect sample. ALPHANUMERIC field, left justified, consisting of up to 20 characters.
14	SAMPLER	Name of Agency of Organization that collected the sample. Must be ALPHANUMERIC consisting of up to 20 characters.

* required field

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Appendix D

Datafile PARM.DAT

ield no.	field name		field Description
1	PARAM_KEY	*	Unique data record identifier. Consists of a fifty-four character field, left justified, containing:

column:	description:
1-12	Unique site identifier as assigned by EPA. Must be alphanumeric.
13-17	Unique solid waste management unit designator. Must be alphanumeric.
18	Media status indicator. Must contain one of the following: C - compliance monitoring station B - baseline monitoring station A - other ambient monitoring station.
19 - 27	Unique station identifier. Must be alphanumeric.
28 - 42	Unique sample identifier. Must be alphanumeric.
43 - 54	Parameter identifier. For chemical constituents for which CAS numbers exist, the CAS number will be the identifier. For other constituents, the identifier will be determined on an as-needed basis.
55 - 58	Replicate number. Identifies the value as one of two or more analyitical results for the same parameter on the same sample. INTEGER NUMERIC, right justified, up to four characters. Not used unless replicate results are reported.

2	QUALF		Qualifier field. ALPHANUMERIC, may contain up to four STORET qualifier codes.
3	VALUE	*	The reported analytical result for the chemical. Must be DECIMAL NUMERIC, consisting of up to twelve character (including the decimal), and may have up to

* required field

CERTIFIED

P 303 242 184

MAIL

Doc No: CLE-00554-12.02-04/08/91

Doc. No.: CLET-00190-12.02-05/14/91

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4WD-RCRA & FFB

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Commander, Atlantic Division
Naval Facilities Engineering Command
Code 1822
Attn: Ms. Laurie A. Boucher, P.E.
Remedial Project Manager for MCB Camp Lejeune
Norfolk, Virginia 23511-6287

RE: Interim Remedial Action Guidance
Marine Corps Base Camp Lejeune, North Carolina

Dear Ms. Boucher:

As requested at our April 16, 1991, meeting, EPA is providing the Navy with guidance on the process and documentation to support a Record of Decision (ROD) for an interim remedial action under CERCLA. The underlying authority for interim remedial action may be found in EPA's program management principles for Hazardous Substance Response in 40 CFR 300.430(a)(1) and (f)(ii)(C)(1) of the National Contingency Plan (NCP) which states in part:

> Sites should generally be remediated in operable units[1] when early actions are necessary or appropriate to achieve significant risk reduction quickly, when phased analysis and response is necessary or appropriate given the size or complexity of the site, or to expedite completion of total site cleanup.

The remedy selection process for an interim remedial action may be initiated at any time during the remedial process. To implement an early action under remedial authority, an operable unit for which an interim remedial action is appropriate is identified. The only prerequisite for an interim remedial action operable unit is that it should not be inconsistent with nor preclude implementation of the final remedy.

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[1] The term "operable unit" used in the context of interim action simply means a discrete action that comprises an incremental step toward final site cleanup.

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Data sufficient to support the Interim Action Record of Decision (ROD) is extracted from past or ongoing RI/FS work for the site or operable unit[2] and an appropriate set of alternatives is evaluated. Few alternatives, and perhaps only one "action" alternative, need to be developed for interim actions (note: the no action alternative will always be carried through the alternatives analysis even if only one action alternative is being considered). A completed baseline risk assessment generally will not be available or necessary to justify an interim action. Qualitative risk information should be compiled to demonstrate that the action is necessary to stabilize the site, prevent further degradation, or achieve significant risk reduction quickly. Supporting data and risk information should be documented in a focused RI report. The criteria under statute (i.e., "Nine Point Criteria") to be evaluated may be limited to those which apply specifically to the action(s) under consideration. In cases where the relevant data can be summarized briefly and the alternatives are few and straightforward, it may be adequate to document this supporting information in the proposed plan which is issued for public comment. This information should also be summarized in the ROD. While the documentation of interim remedial action decisions may be more streamlined than for final action, all public, State, EPA, and Natural Resource Trustee participation procedures contained in the NCP, as relates to the final ROD, should be followed.

To illustrate how an interim remedial action could be utilized at Marine Corps Base Camp Lejeune, consider the following example for the Hadnot Point Industrial Area. The Navy has submitted a "Limited Site Scope of Work for Hadnot Point...", has conducted recent field work and is even starting limited cleanup action (free product removal at the tank farm). Existing data from these previous studies indicates that a large plume of contamination is moving unchecked through the surficial aquifer towards the New River. The Navy wishes to characterize the site by determining source areas and eventually remediate sources of contamination as well as the contamination itself. Prior to initiating this work for source characterization, the Navy should prepare and submit to EPA an expedited RI/FS report for interim remedial action for the Hadnot Point Industrial Area surficial aquifer. The Navy should also issue for public comment a proposed plan for interim action. The proposed plan need only summarize the supporting data to justify the action, provide qualitative risk information, describe one or more alternatives, and summarize the results of the alternative(s) analysis against the nine point criteria of 40 CFR 300.430(e)(9)(iii). Evaluation criteria ("Nine Point") relevant to the evaluation of the interim remedial action need not be addressed in detail. Rather, their irrelevance to the decision should be noted briefly. Following the public comment period, the Navy would submit a draft ROD to EPA for review which summarizes the information contained in the proposed plan and the response to public comments.

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[2] The term "operable unit" used in this context means a portion of a site undergoing a RI/FS.

Doc No. : CLEV-00190-12.02 - 05/14/91

Enclosed is a draft copy of the current guidance on interim remedial action documents. If you need further information on interim remedial action, this subject is discussed in the preamble to the NCP beginning on page 8704 (March 8, 1990, Federal Register). I urge you to contact me at (404) 347-3016, if you still have questions after reviewing these referenced documents.

Sincerely yours,

Carl R. Froede Jr.

Carl R. Froede Jr.
Remedial Project Manager
DOD Remedial Unit
RCRA and Federal Facilities Branch
Waste Management Division

Enclosure

cc: Mr. Jack Butler, NCDEHNR
Ms. Stephanie Del-Re Johnson, MCB Camp Lejeune

Doc. No: CLES-00190-12.02-05/14/91

DRAFT

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

Superfund Publication: 9355.3-02FS-3 March 1991

EPA

Guide to Developing Superfund No Action, Interim Action, and Contingency Remedy RODs

Office of Emergency and Remedial Response
Hazardous Site Control Division OS-220W

Quick Reference Fact Sheet

This guide provides quick reference to the essential components of Records of Decision (RODs) that are prepared to document three specific types of remedial action decisions: (1) **no action**; (2) **interim actions**; and (3) **contingency remedies**. In preparing one of these three types of RODs, RPMs should modify the format of the "standard ROD" for final response actions (see **Highlight 1**) as indicated in this guide (i.e., sections of the standard ROD that have been crossed out should be eliminated, and sections appearing in bold should be modified according to the directions provided). Sections of the standard ROD that are not crossed out or do not appear in bold should be prepared as in a standard ROD. More detail on preparing these three types of RODs is provided in Chapter 9 of the *Interim Final Guidance on Preparing Superfund Decision Documents* (OSWER Directive 9355.3-02).

DOCUMENTING NO ACTION DECISIONS

EPA may determine that no action (i.e., no treatment, engineering controls, or institutional controls[1]) is warranted under the following general sets of circumstances:

- When the site or a specific problem or area of the site (i.e., an operable unit) poses no current or potential threat to human health or the environment;
- When CERCLA does not provide the authority to take remedial action; or
- When a previous response eliminated the need for further remedial response.

Examples of potential situations where no action decisions may be appropriate are provided in **Highlight 2**. The remainder of this section outlines ROD formats to use for situations under which a no action ROD may be warranted.

[1] An alternative may include monitoring only and still be considered "no action."

HIGHLIGHT 1
OUTLINE FOR THE STANDARD ROD

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose
- Assessment of the Site
- Description of the Selected Remedy
- Statutory Determinations
- Signature and Support Agency Acceptance of the Remedy

2. Decision Summary

- Site Name, Location, and Description
- Site History and Enforcement Activities
- Highlights of Community Participation
- Scope and Role of Operable Unit
- Site Characteristics
- Summary of Site Risks
- Description of Alternatives
- Summary of Comparative Analysis of Alternatives
- Selected Remedy
- Statutory Determinations
- Documentation of Significant Changes

3. Responsiveness Summary

- Community Preferences
- Integration of Comments

DRAFT

HIGHLIGHT 2
SITUATIONS WHERE NO ACTION DECISIONS MAY BE APPROPRIATE

- Where the baseline risk assessment concluded that conditions at the site pose no unacceptable risks to human health and the environment.
- Where a release involved only petroleum product that is exempt from remedial action under CERCLA section 101.
- Where a previous removal action eliminated existing and potential risks to human health and the environment such that no further action is necessary.

NO ACTION SITUATION #1: ACTION NOT NECESSARY FOR PROTECTION

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose
- ~~Assessment of the Site~~
- **Description of the Selected Remedy:** The lead agency should state that no action is necessary for the site or operable unit, although it may authorize monitoring to verify that no unacceptable exposures to potential hazards posed by conditions at the site or operable unit occur in the future.
- ~~Statutory Determinations~~
- **Declaration Statement:** None of the Section 121 statutory determinations are necessary in this section. Instead, the lead agency should state briefly that no remedial action is necessary to ensure protection of human health and the environment.
- Signature and Support Agency Acceptance of the Remedy

2. Decision Summary

- Site Name, Location, and Description
- Site History and Enforcement Activities
- Highlights of Community Participation
- Scope and Role of Operable Unit or Response Action
- Site Characteristics
- **Summary of Site Risks:** The information in this section provides the primary basis for the no action decision. The discussion should support the determination that no remedial action is necessary to ensure protection of human health and the environment. The lead agency should explain the basis for its conclusion that unacceptable exposures to hazardous substances will not occur. (In most cases, this will be based on the baseline risk assessment conducted during the remedial investigation (RI).) In limited cases where alternatives were developed in the feasibility study (FS), the lead agency should reference the RI/FS Report.
- ~~Description of Alternatives~~
- ~~Summary of Comparative Analysis of Alternatives~~
- ~~Selected Remedy~~
- ~~Statutory Determinations~~
- Explanation of Significant Changes

3. Responsiveness Summary.

NO ACTION SITUATION #2: NO CERCLA AUTHORITY TO TAKE ACTION

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose
- ~~Assessment of the Site~~
- **Description of the Selected Remedy:** The lead agency should state that no action is necessary for the site or operable unit, although it may authorize monitoring to verify that no unacceptable exposures to potential hazards posed by conditions at the site or operable unit occur in the future.
- ~~Statutory Determinations~~
- **Declaration Statement:** No Section 121 statutory determinations are necessary in this section. This section should explain that EPA does not have authority under CERCLA Sections 104 or 106 to address the problem(s) posed by the site or operable unit. If the problem has been referred to other authorities, this should be explained.
- Signature and Support Agency Acceptance of the Remedy

DRAFT

2. Decision Summary

- Site Name, Location, and Description
- Site History and Enforcement Activities
- Highlights of Community Participation
- Scope and Role of Operable Unit or Response Action
- Site Characteristics
- Summary of Site Risks
- ~~Description of Alternatives~~
- ~~Summary of Comparative Analysis of Alternatives~~
- ~~Selected Remedy~~
- **Statutory Authority Finding:** The concluding statement of the absence of CERCLA authority to address the problem should be the same as in the Declaration.
- Explanation of Significant Changes

3. Responsiveness Summary.

NO ACTION SITUATION #3:
NO FURTHER ACTION NECESSARY

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose
- ~~Assessment of the Site~~
- **Description of the Selected Remedy:** The lead agency should state that no action is necessary for the site or operable unit, although it may authorize monitoring to verify that no unacceptable exposures to risks posed by conditions at the site or operable unit occur in the future.
- ~~Statutory Determinations~~
- **Declaration Statement:** This Declaration should state that it has been determined that no further remedial action is necessary at the site or operable unit. The Declaration should explain that a previous response(s) at the site or operable unit eliminated the need to conduct additional remedial action. This section also should note whether a five-year review is required. Section 121(c) of CERCLA requires a five-year review of any earlier post-SARA remedy that eliminated the need to take further action (i.e., using engineering and/or institutional controls to prevent unacceptable exposures), yet resulted in hazardous substances, pollutants, or contaminants remaining at the site. As a matter of policy, EPA should generally perform a five-year review for pre-SARA remedies and removal actions that result in hazardous substances remaining on site, and any remedial action that requires five or more years to attain the cleanup levels specified in the ROD.
- Signature and Support Agency Acceptance of the Remedy

2. Decision Summary

- Site Name, Location, and Description
- Site History and Enforcement Activities
- Highlights of Community Participation
- Scope and Role of Operable Unit or Response Action
- Site Characteristics
- **Summary of Site Risks:** The information in this section provides the primary basis for the no action decision. The discussion should support the determination that no further remedial action is necessary to ensure protection of human health and the environment. The lead agency should explain the basis for its conclusion that unacceptable exposures to hazardous substances will not occur. (In most cases, this will be based on the baseline risk assessment conducted during the remedial investigation (RI).) Any previous responses that were conducted at the site or operable unit that served to eliminate the need for additional remedial action should be summarized in this discussion. In limited cases where alternatives were developed in the feasibility study (FS), the lead agency should reference the RI/FS Report.
- ~~Description of Alternatives~~
- ~~Summary of Comparative Analysis of Alternatives~~
- ~~Selected Remedy~~
- ~~Statutory Determinations~~
- Explanation of Significant Changes

3. Responsiveness Summary.

II. DOCUMENTING INTERIM ACTION DECISIONS

During scoping, or at other points in the RI/FS, the lead agency may determine that an interim remedial action is appropriate.[2] An interim action is limited in scope and only addresses areas/media that will be followed by a final operable unit ROD. Reasons for taking an interim action could include the need to:

- Take quick action to protect human health and the environment from an imminent threat in the short term, while a final remedial solution is being developed; or
- Institute temporary measures to stabilize the site or operable unit and/or prevent further migration or degradation.

Interim actions either are implemented for separate operable units or may be a component of a final ROD. In either case, an interim action must be followed by a final ROD, which should: (1) provide long-term protection of human health and the environment; (2) fully address the principal threats posed by the site or operable unit; and (3) address the statutory preference for treatment that reduces the toxicity, mobility, or volume of wastes. Examples of possible interim actions are provided in **Highlight 3.**

HIGHLIGHT 3
EXAMPLES OF POSSIBLE INTERIM ACTIONS

- Installing extraction wells to pump a ground-water aquifer to restrict migration of a contaminant plume with the intention of later installing additional wells (or taking other action) to address the contamination in a final action.
- Providing a temporary alternate source of drinking water with the intention of later, in a subsequent action, remediating the source of contamination and/or the aquifer.
- Constructing a temporary cap to control or reduce exposures until a subsequent action is taken.
- Relocating contaminated material from one area of a site (e.g., residential yards) to another area of the site for temporary storage until a decision on how best to manage site wastes is made. (Note: This interim action (i.e., for temporary storage) also could contain a final action component if the excavated area will not require further remediation.)

Interim Actions vs. Early Actions

Interim remedial actions should not be confused with "early remedial actions," which may be **either interim or final.** For example, an early interim action might include providing a temporary alternate water supply and sealing wells that are pumping from a contaminated aquifer. An early final action might involve the complete removal of drums and a limited amount of surrounding contaminated soil that, without early attention, could result in contamination to currently uncontaminated areas.

Because an interim action may be taken early to mitigate the more immediate threats, there may not be sufficient time to prepare a "formal" RI or "formal" FS report. Although preparation of an RI/FS report is not required for an interim action, for the purpose of fulfilling the NCP's Administrative Record requirements, there must be documentation that supports the rationale for the action. A summation of site data collected during field investigations should be suffieient to document a problem in need of response; in addition, a short analysis of what remedial alternatives were considered, which ones were rejected, and the basis for the evaluation (as is done in a focused FS) should be summarized to support the selected action.

INTERIM ACTION ROD FORMAT[3]

The Interim Action ROD should be tailored to the limited scope and purpose of the interim action.

The format for Interim Action RODs is outlined below.

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose

[2] A removal action also may be appropriate to address short-term risks at an NPL site. See Interim Guidance on Addressing Immediate Threats at NPL Sites, OSWER Directive 9200.2-03, January 30, 1990.

[3] In some cases, RODs will be prepared that include both interim actions and a final action: such RODs should clearly specify which components of the action are interim and which are final. For any final action components, the ROD should include the information and documentation required for the "standard ROD." For example, where a ROD includes a final source control measure and a temporary alternate water supply, the ROD must provide the documentation required in the "standard format" for the final source control action, as well as addressing, in the streamlined manner discussed above, the rationale and justification for the interim water supply action. In this example, it would be necessary to address the contaminated ground water in a final action ROD at a later time.

- Assessment of the Site

- Description of Selected Remedy

Statutory Determinations: The declaration statement should read as follows:

This interim action is protective of human health and the environment, complies with (or waives) Federal and State applicable or relevant and appropriate requirements for this limited-scope action, and is cost-effective. This action is interim and is not intended to utilize permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable for this [*interim action/operable unit*]. [*Note: The following sentence should be included, where treatment is part of the interim action: This interim action utilizes treatment and thus is in furtherance of the statutory preference for treatment.*] Because this action does not constitute the final remedy for the [*site/operable unit*], the statutory preference for remedies that employ treatment [*although partially addressed in this remedy*] that reduces toxicity, mobility, or volume as a principal element will be addressed by the final response action. Subsequent actions are planned to address fully the threats posed by the conditions at this [*site/operable unit*]. Because this remedy will result in hazardous substances remaining on site above health-based levels, a review will be conducted within five years after commencement of the remedial action as EPA continues to develop final remedial alternatives for the [*site/operable unit*]. The review will be conducted to ensure that the remedy continues to provide adequate protection of human health and the environment. Because this is an interim action ROD, review of this site and of this remedy will be continuing as part of the development of the final remedy for the [*site/operable unit*].

- Signature and Support Agency Acceptance of the Remedy

2. Decision Summary

- Site Name, Location, and Description

- Site History and Enforcement Activities

- Highlights of Community Participation

- **Scope and Role of Operable Unit:** This section provides the rationale for taking the limited action. To the extent that information is available, the section should detail how the response action fits into the overall site strategy. This section should state that the interim action will be consistent with any planned future actions, to the extent possible.

- **Site Characteristics:** This section should focus on the description of those site or operable unit characteristics to be addressed by the interim remedy.

- **Summary of Site Risks:** This section should focus on risks addressed by the interim action and should provide the rationale for the limited scope of the action. The rationale can be supported by facts that indicate that temporary action is necessary to stabilize the site or portion of the site, prevent further environmental degradation, or achieve significant risk reduction quickly while a final remedial solution is being developed. Qualitative risk information may be presented if quantitative risk information is not yet available, which often will be the case. The more specific findings of the baseline risk assessment should be included in the subsequent final action ROD for the operable unit and the ultimate cleanup objectives (i.e., acceptable exposure levels) for the site or operable unit.

- **Description of Alternatives:** This section should describe the limited alternatives that were considered for the interim action (generally three or fewer). Only those requirements that are applicable or relevant and appropriate requirements (ARARs) to the limited-scope interim action should be incorporated into the description of alternatives.

- **Summary of Comparative Analysis of Alternatives:** The comparative analysis should be presented in light of the limited scope of the action. Evaluation criteria not relevant to the evaluation of interim actions need not be addressed in detail. Rather, their irrelevance to the decision should be noted briefly.

- Selected Remedy

- **Statutory Determinations:** The interim action should protect human health and the environment from the exposure pathway or threat it is addressing and the waste material being managed. The ARARs discussion should focus only on those ARARs specific to the interim action (e.g., residuals management during implementation).[4] The discussion under "utilization of permanent solutions and treatment to the maximum extent practicable" should indicate that the interim action is not designed or expected to be final, but that the selected remedy represents the best balance of

[4] An interim remedy waiver may be appropriate where a requirement that is ARAR cannot be met as part of the interim remedy but will be attained (unless use of one of the other five waivers is justified) by the final site remedy (CERCLA §121(d)(4)(A) and NCP 300.430(f)(1)(ii)(C)(1)).

tradeoffs among alternatives with respect to pertinent criteria, given the limited scope of the action. The discussion under the preference for treatment section should note that the preference will be addressed in the final decision document for the site or final operable unit.

- Explanation of Significant Changes

3. Responsiveness Summary.

III. DOCUMENTING CONTINGENCY REMEDIES

The lead agency in consultation with the support agency may decide to incorporate a contingency remedy in the ROD. Use of a contingency ROD may be appropriate when there is significant uncertainty about the ability of remedial options to achieve remediation levels (e.g., cleanup of an aquifer to non-zero MCLGs or MCLs).

For example, a contingency ROD may be appropriate when the performance of an innovative treatment technology (or a demonstrated technology being used on a waste for which performance data are not available) appears to be the most promising option, but additional testing will be needed during remedial design to verify the technology's performance capabilities; in this case, a more "proven approach" could be identified as a contingency remedy. [Note: The use of contingency remedies should be carefully considered. Site managers should perform the necessary steps of treatability studies/ eld investigations to evaluate a technology's performance capabilities during the RI/FS. More detailed testing at the operational-scale level may be performed during design.]

Where applicable, the ROD should specify under what circumstances the contingency remedy would be implemented, i.e., what are the general criteria (e.g. failure to achieve desired performance levels) that EPA will use to decide to implement the contingency option as opposed to the selected remedy.

CONTINGENCY REMEDY ROD FORMAT

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose
- Assessment of the Site
- **Description of the Selected Remedy:** Both the selected remedy and the contingency remedy should be described in bullet form.
- **Statutory Determinations:** The Declaration should be modified to indicate that both the selected remedy and the contingency remedy will satisfy the statutory requirements.
- Signature and Support Agency Acceptance of the Remedy

2. Decision Summary

- Site Name, Location, and Description
- Site History and Enforcement Activities
- Highlights of Community Participation
- Scope and Role of Operable Unit or Response Action
- Site Characteristics
- Summary of Site Risks
- **Description of Alternatives:** This section should identify any uncertainties about the use of the technologies being considered, and the extent additional testing is needed. The selected remedy and the contingency remedy must be fully described.
- **Summary of Comparative Analysis:** The selected remedy and the contingency remedy should be evaluated fully against the nine criteria; the uncertainties should be noted, as well as the expectations for performance. Community (and support agency) acceptance of an innovative technology should be discussed in light of the CERCLA provisions in Section 121(b)(2), which takes into account the degree of support for the action by the community.
- **Selected Remedy:** The selected and contingency remedies should be identified. Additional testing/investigations to occur as part of remedial design to further evaluate the selected remedy should be discussed. **The criteria that will be used to decide to implement the contingency remedy should be identified.**
- **Statutory Determinations:** The statutory determination discussion should document that both remedies fulfill CERCLA Section 121 requirements.
- Explanation of Significant Changes

3. Responsiveness Summary.

NOTICE: The policies set out in this memorandum are intended solely as guidance. They are not intended, nor can they be relied upon, to create any rights enforceable by any party in litigation with the United States. EPA officials may decide to follow the guidance provided in this memorandum, or to act at variance with the guidance, based on an analysis of specific site circumstances. The Agency also reserves the right to change this guidance any time without public notice.

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Underground Spill Cleanup Manual

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Underground Spill Cleanup Manual

I. GEOLOGY AND GROUNDWATER

When gasoline, kerosine or similar petroleum product is lost into the ground, its behavior and ultimate fate will depend on the hydrogeology, or underground water conditions. Although spills involving hazardous materials or large volumes of fluids should be handled by an experienced professional familiar with this kind of problem, an understanding of certain elements of geology and groundwater hydrology can be useful to anyone dealing with an underground spill. For purposes of this discussion, the terms "gasoline," "petroleum," "oil" and "product" can be used interchangeably.

1.1 Rocks and Soils

The term "soil" is used here to mean loose, unconsolidated surface material, such as sand, gravel, silt or clay. "Bedrock" is the hard, consolidated material that usually lies under the soil, which commonly includes sandstone, limestone or shale. Most areas have a soil cover ranging in thickness from a few feet to hundreds of feet. Less commonly, bedrock may be at the surface with little or no soil cover.

Generally, rocks and soils are composed of small fragments or grains, such as sand. When these fragments are pressed together, small voids or "pores" exist between the grains in which fluid may be contained. Measurement of the total volume of these voids is called the "porosity" of the rock or soil. If the pores are interconnected, the rock or soil is "permeable," that is, a fluid can pass through it. "Permeability" is a quantitative measure of this property. Materials, such as clay, silt and shale have many, but extremely small, pores that are poorly interconnected. Since fluids cannot pass readily through such materials, they are "impermeable."

The term "aquifer" refers to a permeable section of soil or rock capable of transmitting water.

The more common rocks and soils usually occur in distinct layers or beds created by successive deposits of different types of rock and soil material. Such beds are commonly exposed in road cuts and may be horizontal, but more often will slope or "dip" in some direction. Such dips, in addition to the varying porosities and permeabilities of the different layers, can affect the movement of fluids underground.

Bedrock near the surface frequently is cracked and fluid movement can be confined to these fractures, rather than through connecting pores. The number, size and location of these fractures govern the movement of fluids in this environment and may vary greatly from one location to another.

Limestone near the surface may develop openings and fissures ranging in size from less than an inch to large caverns. In other instances, limestone may have low porosity and permeability.

The movement of fluids in a bedrock aquifer will be similar to those in a soil aquifer, although there are additional constraints. Because of these complications, a rather detailed geological study may be required to determine the proper approach for handling a spill in bedrock.

1.2 Groundwater

In most places, water exists at some depth in the ground. The source of most groundwater is precipitation over land, which percolates into porous soils and rocks at the surface. Depending on the location, a second important source may be rivers and streams that seep water into the subsurface. In many areas, enough groundwater is present to provide all or a major part of the water supply for towns, cities and rural areas. Details of a hypothetical groundwater system are shown in Figure 1.

The position of the water table is indicated by the level to which water rises in wells. Starting at the surface, there is a zone of partial saturation called the "zone of aeration." Pores in this zone contain some water, but are mostly filled with air. The depth at which water completely fills the pores in the soil defines the beginning of the "zone of saturation." The upper surface of this zone is the "water table," and the water in the zone is "groundwater" (see Figure 2).

The water table surface usually conforms to the general topography of the land. The table fluctuates, rising during rainy seasons and falling during dry periods. Immediately above the water table is the "capillary zone," a complex section which greatly affects the movement of spilled oil, and which will be discussed later.

Most layers of rock or soil in a groundwater system can be classified as either "aquifers" or "aquicludes" (Figure 1). An aquiclude is a rock or soil layer sufficiently impermeable to prevent the passage of water.

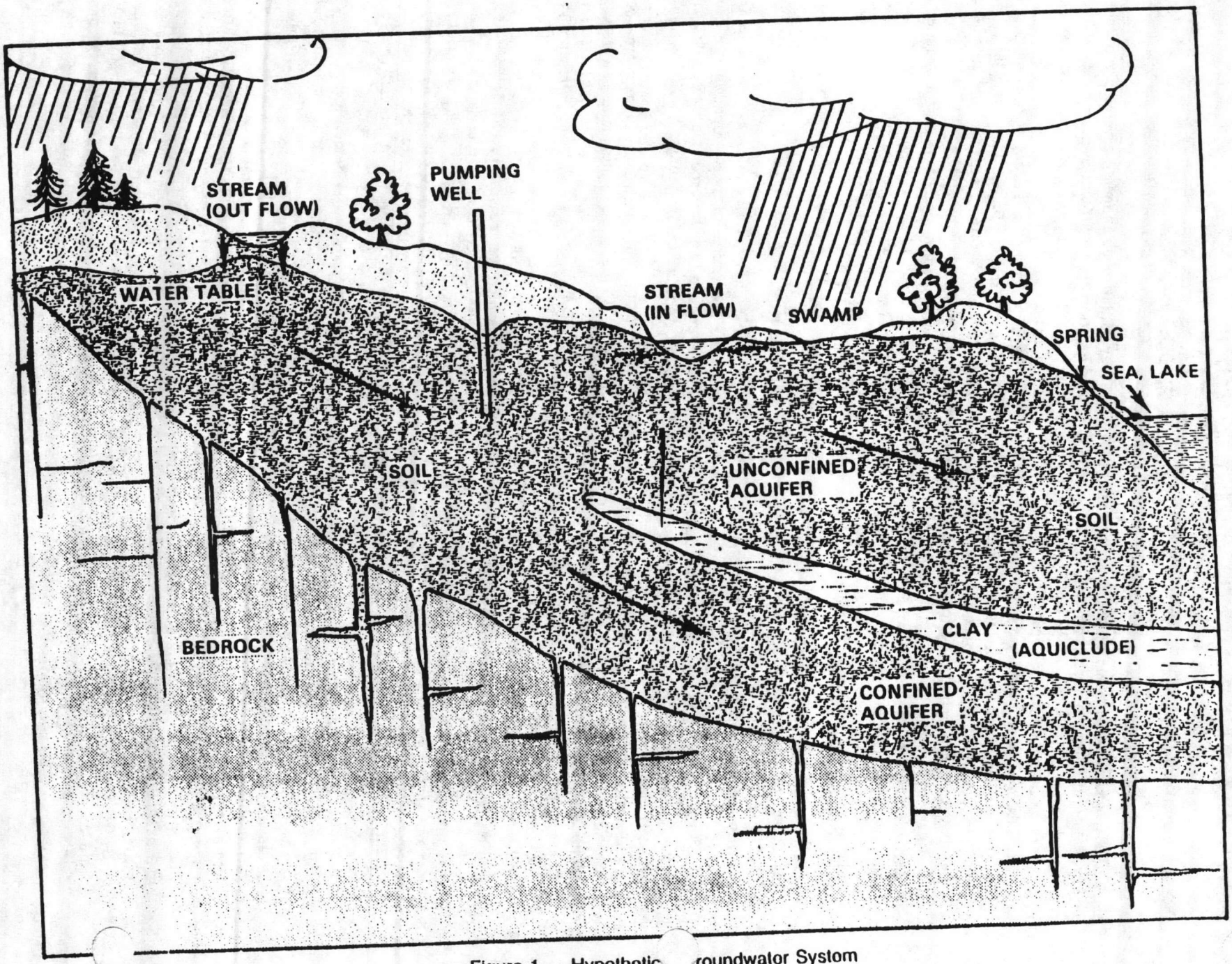

Figure 1 — Hypothetical Groundwater System

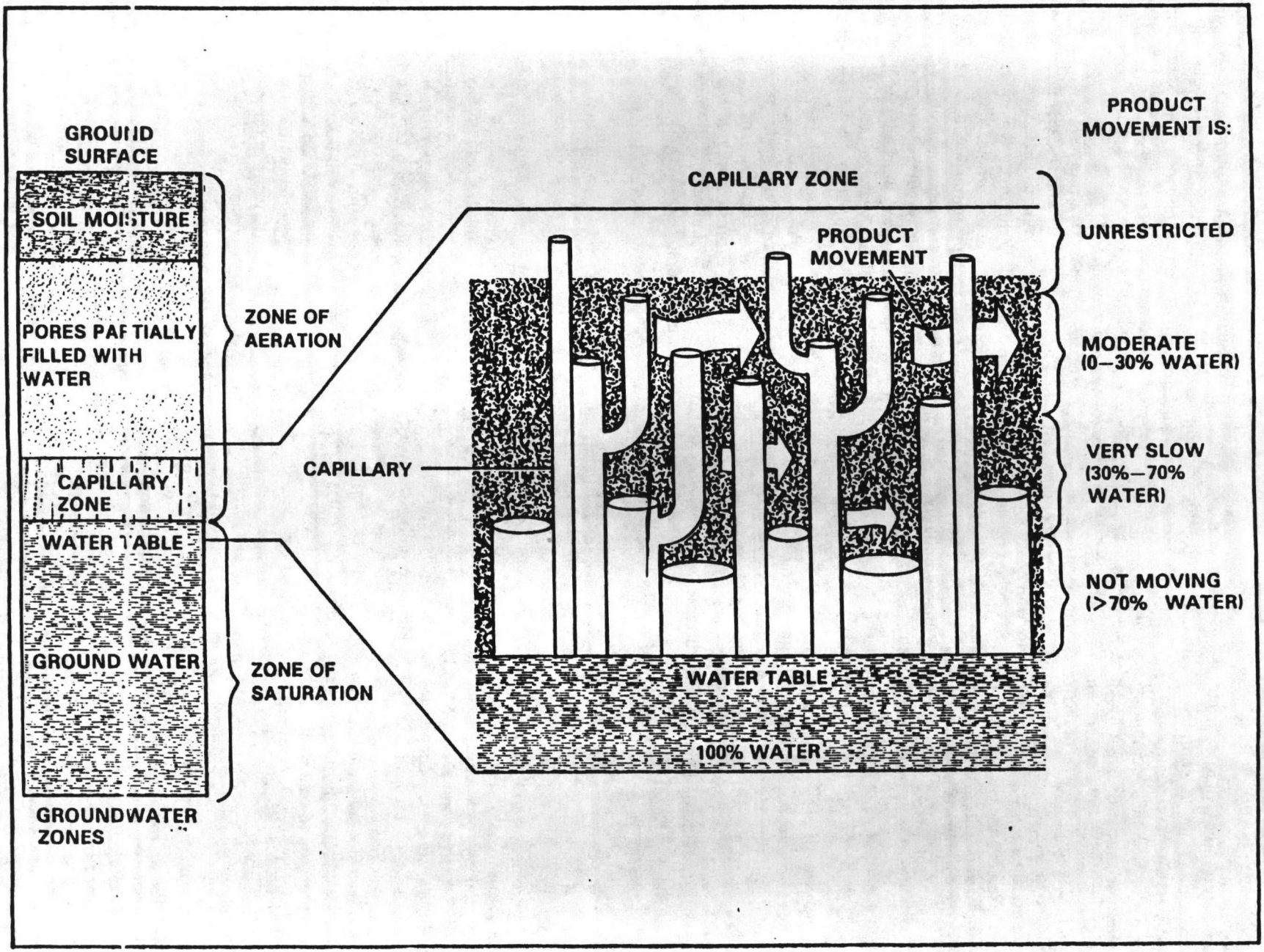

Figure 2 — Diagramatic Illustration of Water Rising in Capillaries of Varying Diameters and the Restricting Effect on Product Movement Through the Zone

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An aquifer not separated from the ground surface by an aquiclude is an "unconfined" aquifer. Groundwater associated with it is free to move by gravitational forces. This is the type most commonly involved in oil spills. An aquifer that is overlain by an aquiclude is a "confined" or "artesian" aquifer, which is recharged at a higher elevation. Artesian water is under sufficient pressure to rise above where the top of the aquifer is encountered in a well. The height to which artesian water rises is a measure of the pressure created by the weight of the water in the areas of the aquifer higher than the aquiclude. Contamination of an artesian aquifer by oil spilled at the surface is highly unlikely, unless the spill is in the recharge area.

1.3 Groundwater Movement

In nearly all cases, groundwater is slowly moving. Water in an unconfined reservoir is under atmospheric pressure and, under the influence of gravity, normally flows toward a point of discharge, such as a pumping well, stream, lake or sea. The direction of flow, as a rule, will roughly parallel the land surface.

Many cities and industrial areas draw millions of gallons daily from groundwater aquifers. The locations and relative production rates of municipal wells may significantly disrupt normal flow patterns, and complete reversal of flow direction in some areas is common. Considerable data can be obtained in such areas for use in solving groundwater problems.

The rate of movement of groundwater is usually overestimated by most people, who think of it in terms of a surface stream. This serious misconception must be corrected, in order to deal intelligently with groundwater flow. As previously noted, groundwater in a typical aquifer moves through minute pores between soil grains. While forces similar to friction may reduce movement to an almost imperceptible level, rates of groundwater movement vary markedly from many feet per day to a few feet per year. In fact, the range is so great and variable that "handbook" averages are meaningless at specific locations.

Rate of flow depends on the permeability of the aquifer and the "hydraulic gradient," or slope, of the water table. Thus, the flow rate of groundwater is rather difficult to measure directly and, in practice, is seldom done. More commonly, flow rates are calculated from well pumping test data.

II. BEHAVIOR OF SPILLED OIL IN SOIL

An accidental spill of oil or product may occur suddenly or a leak may develop slowly. A slow, unsuspected leak over a long period may be most harmful, since extensive damage may occur prior to its detection. In these instances, cleanup may be more difficult and expensive than for a sudden spill, which is usually detected quickly.

A very early step in evaluating a spill should be consideration of possible migration routes, since fluid moving underground follows the most permeable, least resistant path. As an example, the backfill in trenches carrying utility conduits, sewers or other piping is frequently much more permeable than the undisturbed native soil. The interconnection of such excavations in a typical urban area can permit relatively fast and easy transport of product to nearby basements, sewers or other below-grade structures. Utility companies and various city departments can offer much aid in locating and inspecting these facilities.

Oil spilled into soil will tend to flow downward, with some lateral spreading, as illustrated in Figure 3. The rate of product movement in the soil will depend on product viscosity, soil properties, and the rate at which the product has been lost. For example, light products, such as gasoline, will penetrate rapidly, while heavy oils will move more slowly.

If the near-surface soil has a high clay content and very low permeability, the product may penetrate very little or not at all. However, a porous, sandy soil may absorb the product quickly. It is especially important, therefore, that the type of soils involved be known.

If the spill area is essentially circular, the general shape of the area of passage will be conical, although it will be somewhat modified by the soil layers through which the oil passes. Eventually, the downward movement will be interrupted by one of three events: (1) the oil will be absorbed by the soil, (2) it will encounter an impermeable bed, or (3) it will reach the water table.

2.1 Soil Absorption

As oil moves downward through soils, some of it becomes trapped between individual soil particles and remains behind the main body of oil, which may eventually reach the water table (Figure 4.) Thus, the original oil continually depletes as it migrates through the soil. In some spills, the volume of the oil is insufficient to reach the water table and remains trapped in the soil.

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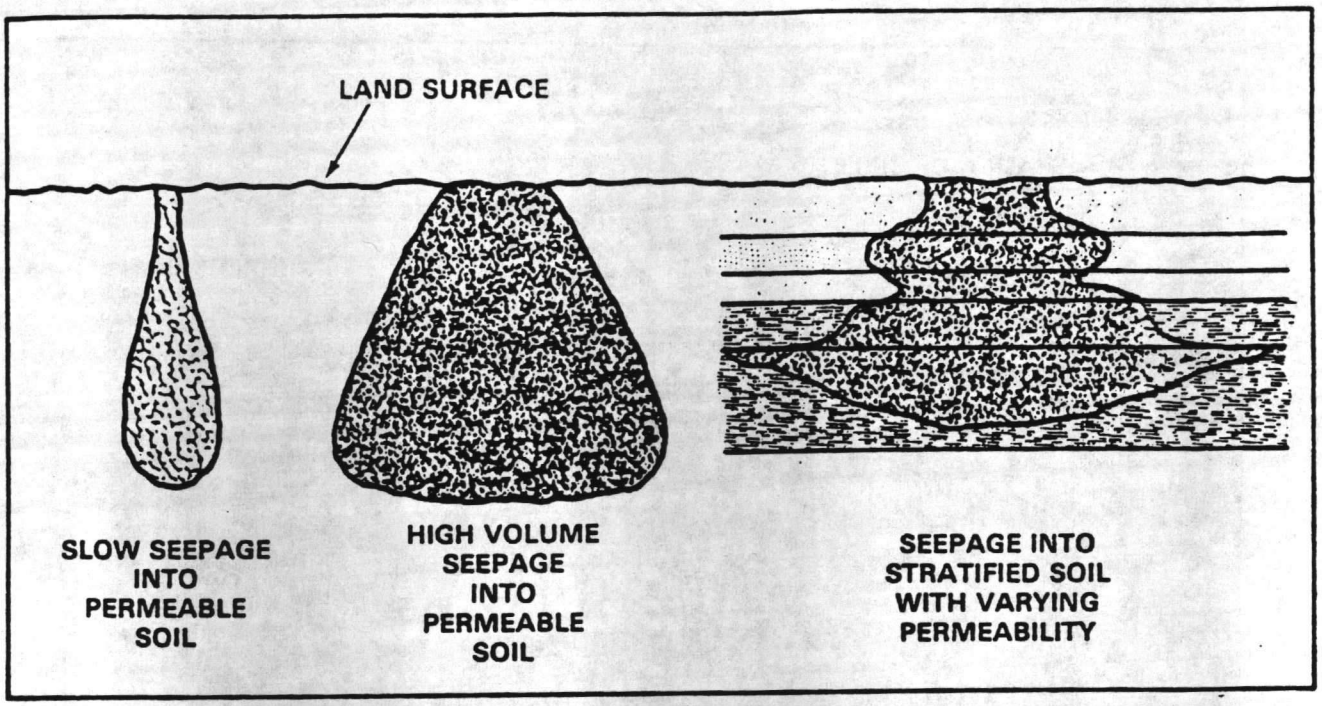

Figure 3 — Product Seepage

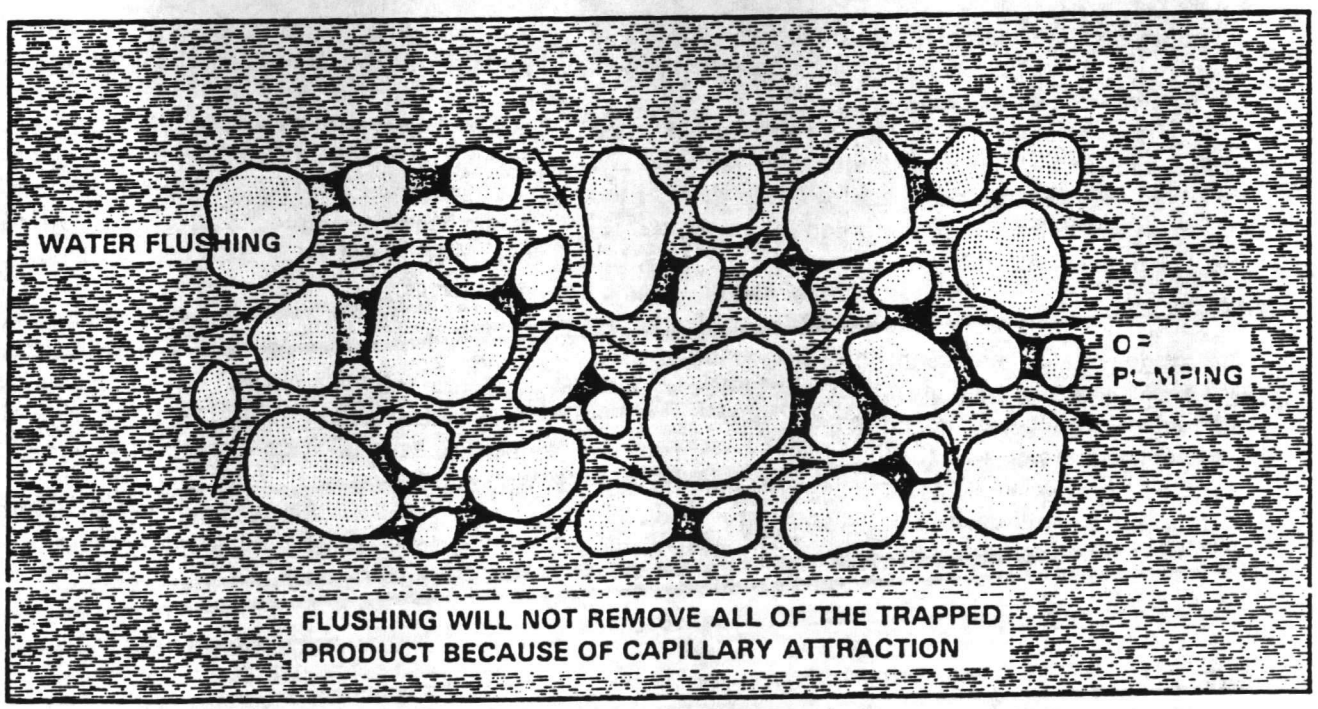

Figure 4 — Trapped Product Droplets

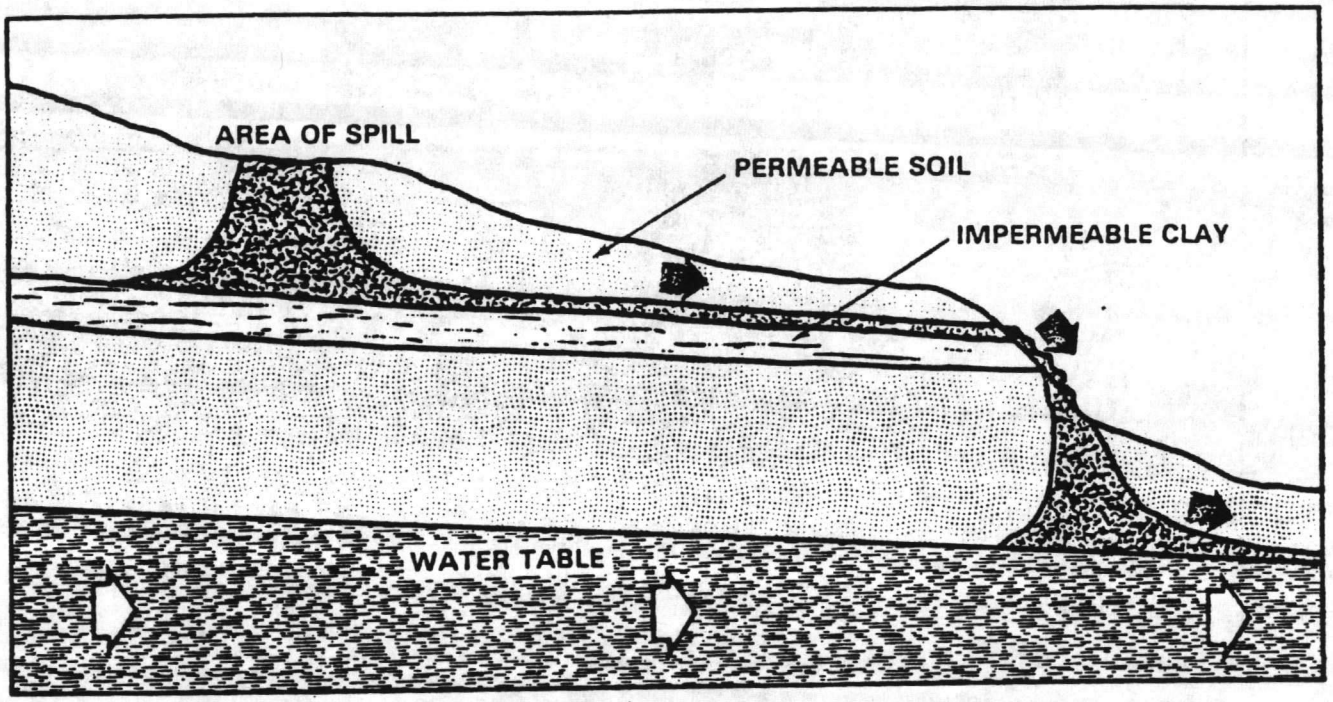

Figure 5 — Possible Migration of Product to Outcrop, Followed by Second Cycle Contamination

As rainwater later percolates through this zone, some droplets of oil that are weakly attached to the soil will break loose and flush away.

Oil that is retained in the soil pore structure is called "immobile" or "residual" saturation. This basic "trapped oil" condition can last for many years as the oil slowly degrades. While the potential for some soluble components to reach the water table remains, the threat is far less than if the oil had reached the groundwater surface in liquid form. Therefore, reduction to the residual state removes much of the pollution risk.

The volume of soil required to immobilize a given amount of oil depends mainly on two factors: (1) the size of soil particles, and (2) the type of oil or product involved. If precise data are available and the soil system is quite homogeneous, which is rarely the case, calculations may produce a reasonably accurate result. Usually the data consist of guesses and rough estimates, and the results are subject to considerable error.

2.2 Movement of Product to an Impermeable Stratum

As the body of spilled oil moves downward, its course is affected by variations in permeability of the soil layers through which it passes. Should the product encounter an impermeable layer, it will spread laterally, until it becomes immobile or until it comes to the surface where the layer outcrops. Should the latter occur, and enough product is still in motion, a second cycle of soil contamination will begin (Figure 5). This condition would be most common in an arid region or during a dry season and, as a rule, exists only within several feet of the surface.

Downward movement may be additionally complicated by the presence of thin lenses of clay or other low-permeability material. If these are present, the fluid path will be altered, as shown in Figure 6. Frequently, each of these lenses will have a thin layer of water on its top side known as a "perched" water table.

A perched water table is not connected with the main aquifer. Yet, some descending product may come to rest on top of it, while the remainder may reach the main water table. Inaccurate evaluations sometimes result from mistaking a perched water table for the main water table.

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III. PRODUCT ON THE WATER TABLE

3.1 Movement on Groundwater

The contact of spilled product with the water table usually is the most troublesome result of an on-land spill. This condition greatly increases the risk of polluting a water supply, and may increase the chance of movement to some underground structure, such as a basement, sewer or conduit. The degree of risk depends on the nature of the groundwater system and the way it is utilized.

Figure 7 illustrates a pattern of oil descent to a water table. A sudden, large-volume spill will depress the water table and spread in all directions in a layer above the water table. As the layer becomes thinner, it will begin to move in the direction of groundwater flow (Figure 8).

A slower leak will descend in a narrow cone and spread in the direction of water movement, Lateral spreading will usually be slower than the flow rate of the groundwater.

Theoretically, the spread of a hydrocarbon spill on a water table can be calculated. In an actual field situation, however, so many assumptions and estimates are required that accurate calculations of the product spread cannot be made. Usually, it is better to monitor directly the spread of the contaminant through the use of observation wells.

3.2 Capillary Zone

The upper surface of a groundwater body is very unlike that of water aboveground. Groundwater exists in innumerable small pores between the soil grains, which connect vertically to form capillary tubes rising above the water table. Each of these tubes will cause water to rise some distance, depending on the size of the capillary. Thus, there is a substantial amount of water held in the soil structure above the water table, in what is called the "capillary zone" (Figure 2).

The thickness of the capillary zone is primarily a function of pore and grain size. Coarse-grained soils will have a relatively thin zone; fine-grained soil will produce a thicker zone. These intervals commonly may range from a few inches to three or more feet, although averages of typical aquifers might be on the order of 10 to 20 inches.

The upper surface of the product will also be affected by capillarity and will experience a similar rise. This

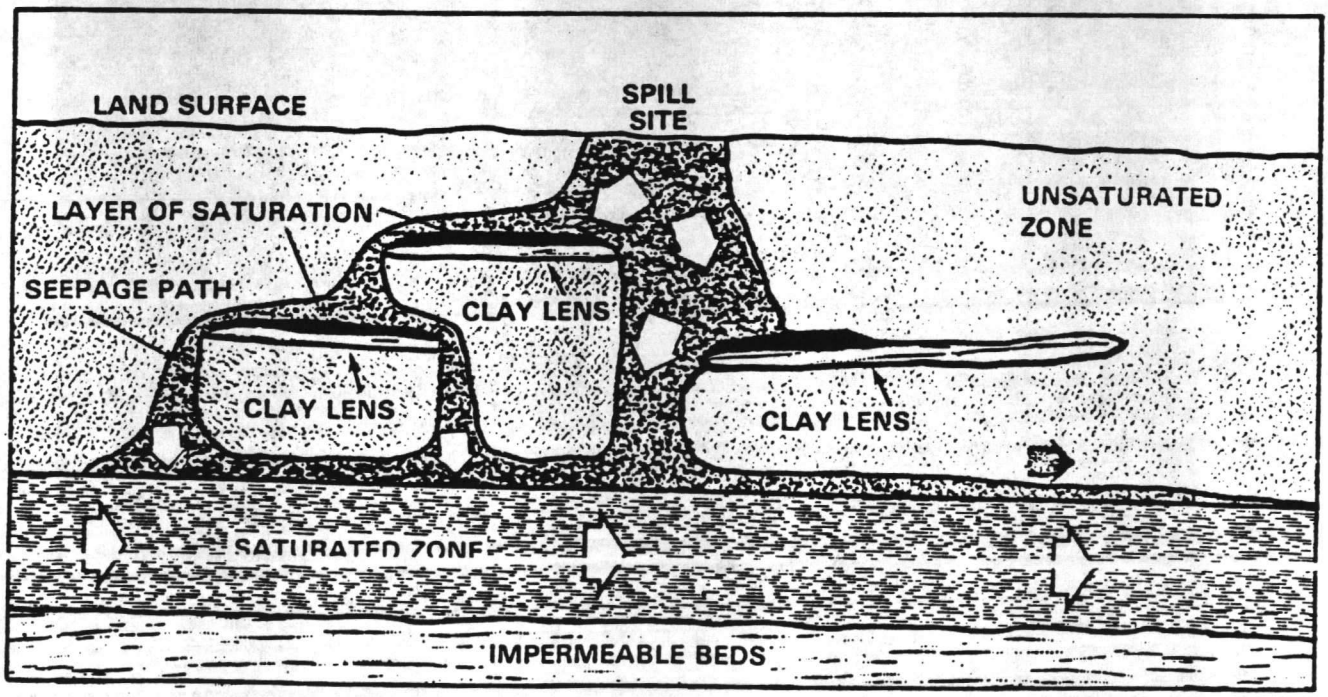

Figure 6 — Effect of Clay Lens in Soil

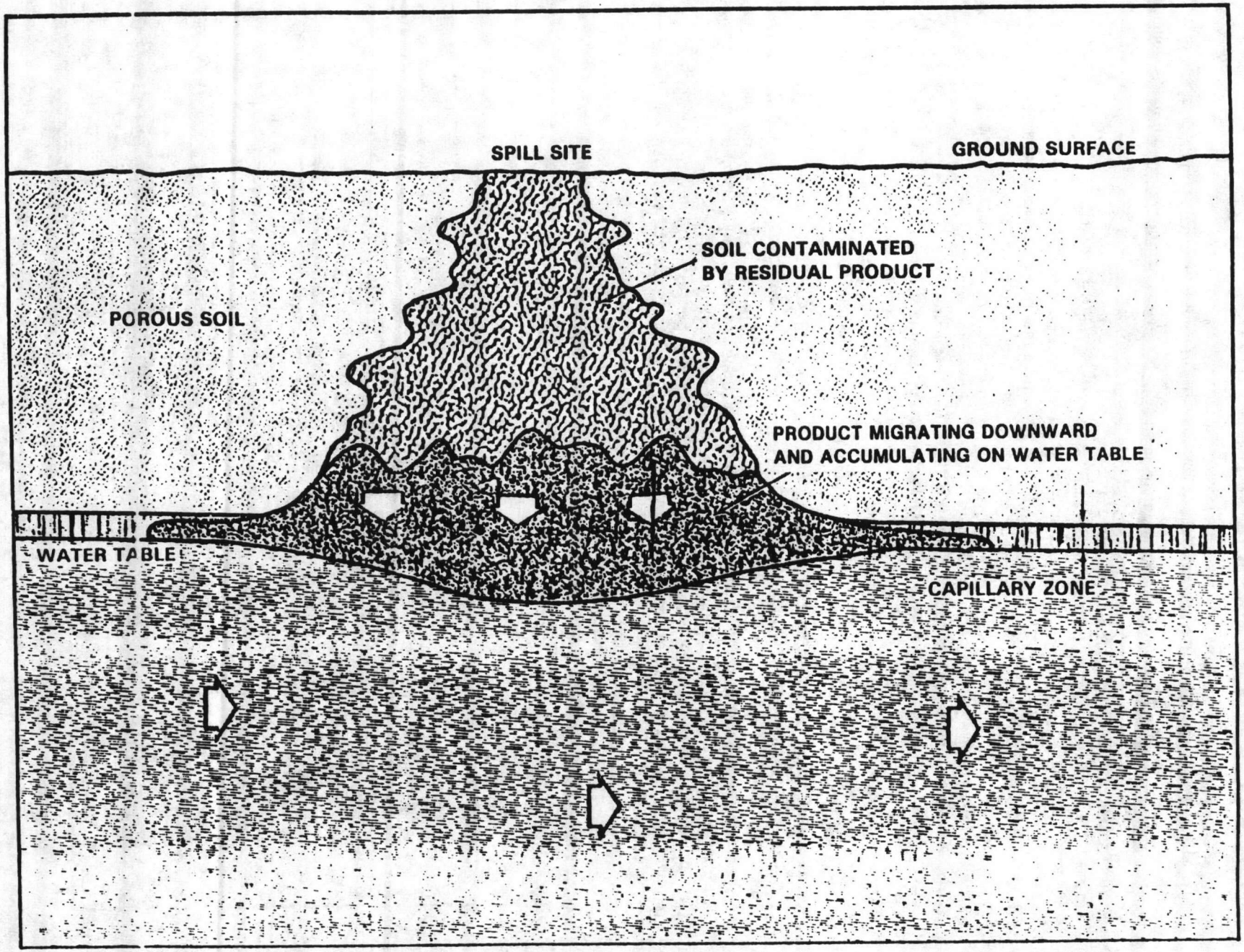

Figure 7 — Typical Behavior in Porous Soil Following a Sudden, High Volume Spill

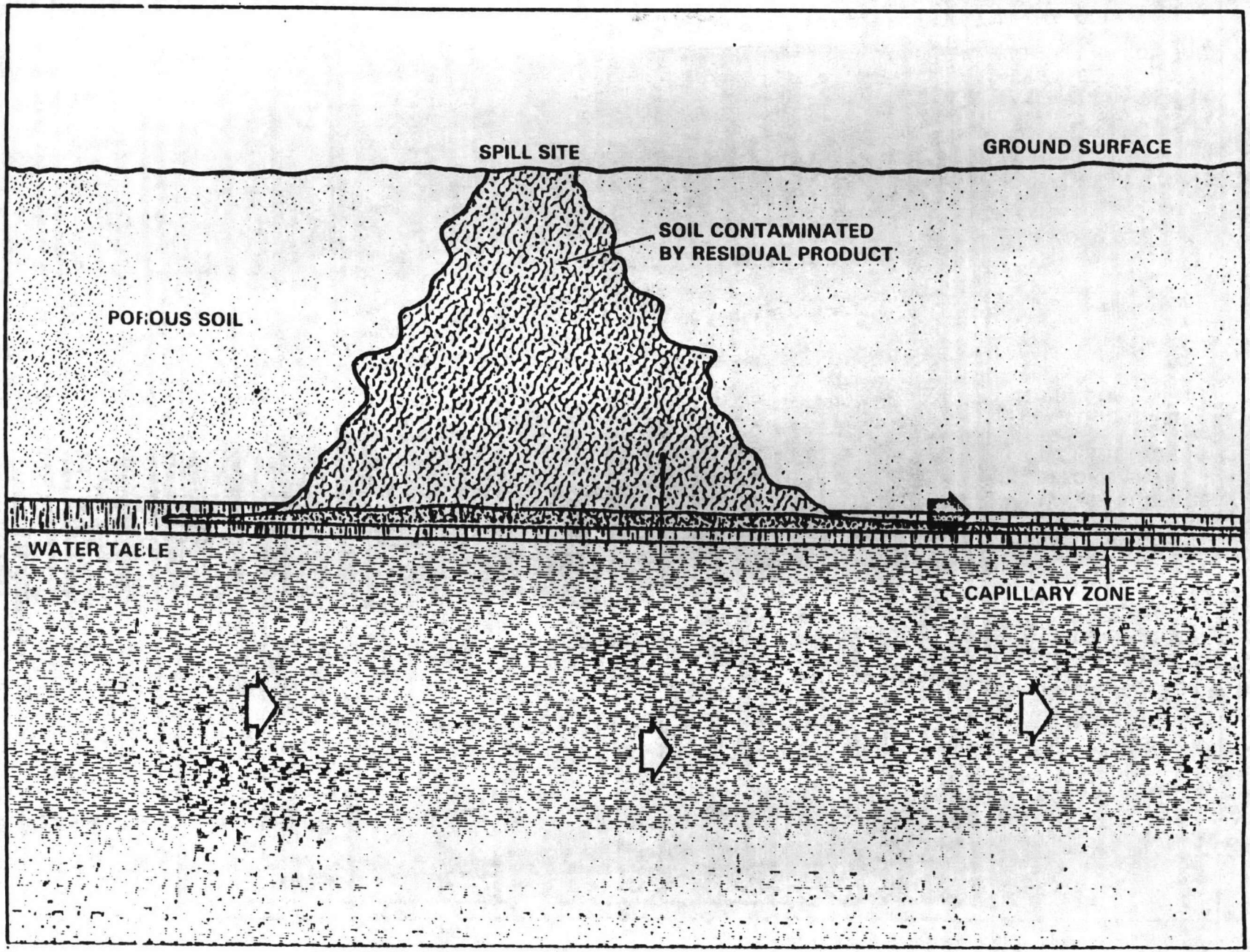

Figure 8 — Behavior of Product After Spill Has Stabilized

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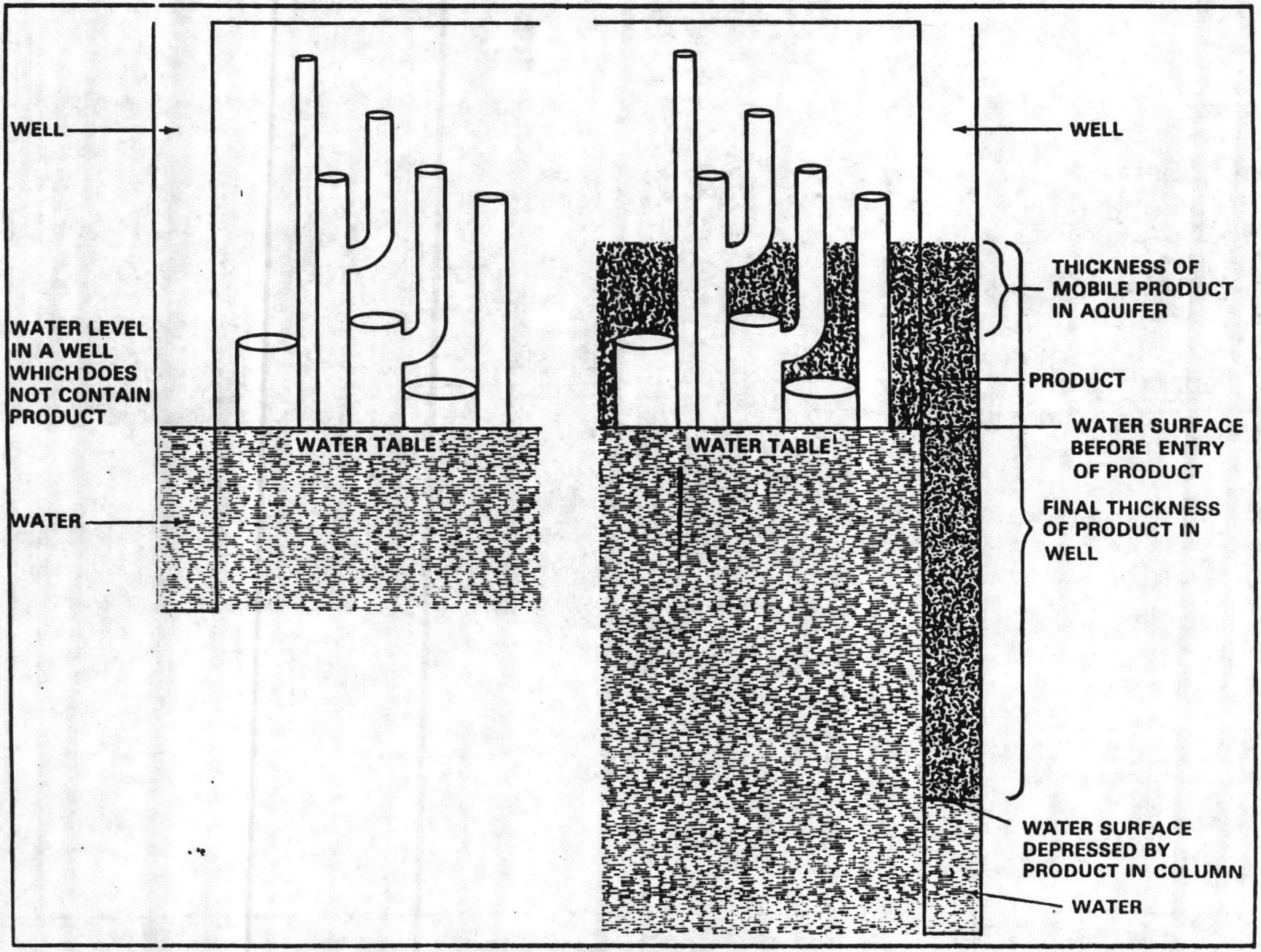

Figure 9 — Diagramatic Illustration Showing Product Accumulating in a Well to a Thickness Greater Than in the Aquifer

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product rise has the potential for producing vapor problems in buildings even when the water table lies several feet below a floor. Immediately above the water table, the capillary zone will be 100 percent saturated with water. This will decrease gradually upward, until it reaches near zero saturation at the top of the capillary zone. Water held by capillary action will not flow into a well.

As descending oil approaches the water table, it cannot displace much of the capillary water. Therefore, it will move downward around the water-filled pores and through the larger pores until it encounters water which it cannot bypass. The weight of the oil will depress the water table and the capillary zone will follow it downward, since each capillary must remain attached to its source. The amount of oil at any position in the capillary zone will depend on the amount of capillary water present. The least oil will be near the bottom of the zone, which is heavily saturated with water, and the most oil will be at the top, where there is less water saturation.

The amount of water in the capillary zone inhibits the lateral movement of the oil. In the upper portion of the zone, where there is little water, product may move with only minor interference. Near the middle, movement will be greatly restricted. And, in the lower portion, movement may not be possible at all. This is illustrated in Figure 2.

Consequently, a body of spilled oil will spread over and through the capillary zone, as shown in Figure 8. Eventually, with enough time and no addition of new product, the layer of gasoline will reduce to a critical thickness and stop moving. The thickness is determined by existing permeability and gradient. The ultimate thickness of the mobile product will be only a fraction of the thickness of the capillary zone.

Consideration of these conditions also makes it evident that the thickness of oil measured in a well will be much greater than the corresponding thickness in the aquifer. This occurs because the layer of mobile product in the capillary zone is some distance above the water table. When this product encounters the open space in a well bore, it "pours" in and accumulates on the water surface. As it accumulates, its weight begins to depress the water surface. It continues to thicken until the top of the oil in the well is level with the top of the oil in the mobile layer in the aquifer. Consequently, any estimate of the total spill volume based on the oil thickness in wells will result in a considerable overestimate (see Figure 9). *It is important to recognize that the thickness of the mobile product in the capillary zone may be less than an inch, while the thickness in a test well may be several inches or more.*

3.3 Vertical Movement

A typical water table will fluctuate up and down in response to seasonal changes and short-term variations in rainfall. If a petroleum product is present on the water table during this fluctuation, it will be carried vertically on the changing water surface and will leave behind a residue of product in the soil (Figure 10). Large fluctuations can result in immobilization of a great quantity of product.

3.4 Contamination by Solution

Oil generally will not mix with water and will simply float on the surface. Many oils and refined products, however, contain certain components which are slightly soluble in water. Solubility is greatest with the lighter, aromatic components.

Gasoline is high in water-soluble hydrocarbons. Concentrations of gasoline, when dissolved in water, produce odor and taste that can be detected by many people at levels of only a few parts per million. Although most contamination by water-soluble hydrocarbons occurs at the oil-water interface, when rainwater infiltrates contaminated soil, it may pick up additional soluble components and carry them into the groundwater system. Under normal conditions, these dissolved components are restricted to the upper part of the aquifer. Pumping may cause some downward movement and increase the risk of contaminating the aquifer. Expansion of the contaminated zone may occur as a result of high-volume pumping within the area of influence of the well.

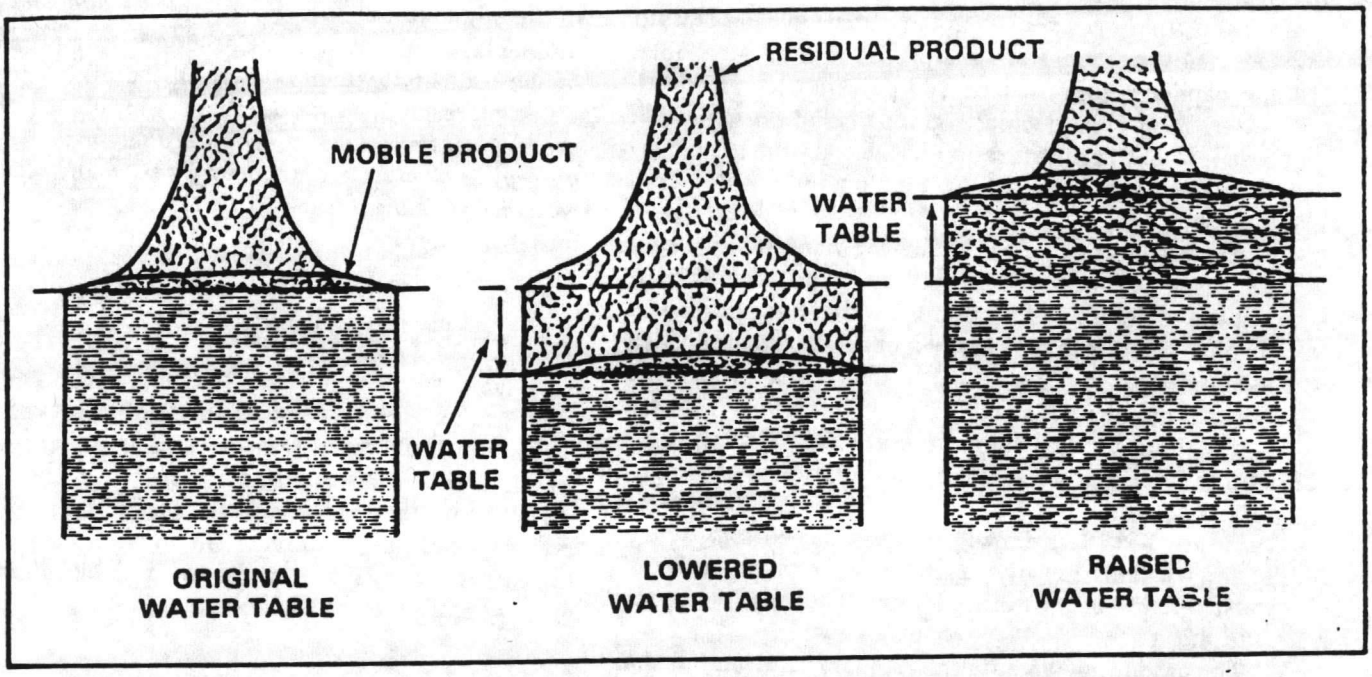

Figure 10 — Vertical Expansion of Contaminated Soil Zone by Fluctuating Water Table

IV. EVALUATING A SPILL

The procedures to use in evaluating an underground spill will vary considerably, since each case is unique. A set of procedures useful for one leak or spill may be inappropriate for another. Physical factors—including geological conditions, the presence and depths of sewers, basements and wells, the amount of product spilled, the relative congestion of an area, and many other variables—will determine the course of the evaluation.

WARNING: When liquid product or vapors have entered a confined structure and pose a threat of fire or explosion, all necessary precautions must be taken to protect life and property, as outlined in Section VI. Once this has been accomplished, the next most important step is to determine the source of the flammable or combustible liquid and prevent further contamination.

In general, there are two types of underground spills which require investigations. The first is the "known source" leak or spill, where the location of the loss and the approximate or exact amount of product involved is known. Such cases are commonly much less complicated and frustrating to handle than the "unknown source" or "mystery" leak.

Generally, the source of a flammable or combustible liquid will be near the location of the discovery of unconfined liquids or vapors. Because liquids can travel blocks or even miles underground, the area from which an escaped liquid could have come may be square miles in extent and often may include many facilities storing or handling flammable or combustible liquids. If a check of potential sources, such as product tanks and pipes, immediately adjacent to or within a few hundred feet of the discovery does not reveal an obvious or very likely source, a search should be made of an extended area around the discovery.

A map of the area should be sketched or obtained. Each facility checked should be marked on the map, and all the information obtained recorded in a notebook. Good data, well organized, will prove invaluable in subsequent efforts to solve the problem.

Often the source can be found by inquiry or simple inspection. A very efficient method of conducting the search is to assign two person teams (with one person

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representing local public authority) to specific areas on the map. The search should begin with the nearest and most obvious potential sources from the point of discovery, and worked outward from there. The team should concentrate on moving uphill, upstream of underground water flow, or upstream of sewer or conduit flow.

If this initial investigation fails to discover an obvious or very likely source within the first few hours, it is advisable, while the primary search continues, to begin testing equipment for concealed leaks at the closest and most probable sources.

Products usually travel slowly underground, perhaps a few feet per day, or may not move at all until the water table rises. There can be considerable time lapse between a leak or spill and the finding of liquid or vapor. All potential sources, regardless of how long ago they occurred, should be investigated. No potential source should be eliminated on the basis of time, until there is enough information to justify elimination of that suspected source.

The list below should be used to check for leaks, spills or other possible sources by asking questions and by simple inspection of the premises and equipment. Unless an obvious source is found, the search should not stop at the first sign of a potential source. There may be more than one source contributing to the spill.

1. *Possible sources to check:*
   a. Service stations
   b. Motor vehicle garages
   c. Automobile dealerships
   d. Convenience stores
   e. Municipal garages
   f. Abandoned or converted service stations
   g. Fleet operators such as taxicab companies, bakeries, dairies and contractors
   h. Cleaning establishments
   i. Industrial plants, including refineries, terminals and bulk plants
   j. Schools, hospitals and other institutions with underground or surface fuel oil tanks
   k. Pipelines
   l. Abandoned oil and gas wells
   m. Subsurface disposal and injection systems.
2. *Procedures and data required for investigation:*
   a. It should be determined if accurate daily inventory control records are maintained at the facilities. In most locations, regulations now specify that such records must be maintained and be available for inspection by an enforcing authority. If records are not maintained in good order, the facility should be considered a primary potential source of the fugitive petroleum, and the tanks and underground lines should be tested for tightness as soon as possible at the expense of the property owner or operator. If records are properly maintained and reconciled, they should be carefully reviewed for discrepancies or loss trends. (Further information on inventory control may be found in *API Publication 1621, "Recommended Practices for Bulk Liquid Stock Control at Retail Outlets."*)
   b. It should be determined if a recent spill or overfill occurred during delivery of product to the facility.
   c. It should be determined if there has been a tank or pipe leak at the facility anytime during the past few years. Leaked product often takes several weeks, months, or years before it migrates to a location where it presents a hazard. The owner or operator should be asked if he has any knowledge of a leak occurring at neighboring facilities.
   d. A check should be made for recent excavations or new or patched concrete or asphalt, often a sign that a tank or piping system has been repaired.
   e. Product dispensers should be inspected to determine if they are out of plumb or badly dented, an indication that they may have been struck by a vehicle, with resulting damage to the underground piping system.
   f. It should be determined if water had been previously found or is presently in an underground tank.
   g. Remote pumps should be inspected to determine if they are leaking or if the soil or sand around the pumping unit is saturated with gasoline.
   h. With the panels removed, dispensers should be observed while in operation, to determine if leaks exist in the dispenser itself or in any of the exposed piping.
   i. If leak detectors are installed on remote pumping systems, it should be determined if they are functioning properly.

If the investigation fails to locate the source, owners of facilities should be asked for their cooperation in performing tests on the underground equipment. A governmental official, such as a fire marshal or environmental agent, may need to exercise the necessary authority to require tests, particularly at facilities where inventory records have not been maintained.

When leaks in equipment are discovered, the owner should stop further use of the equipment until the leak

is repaired or the defective equipment has been replaced. If liquid is escaping from a storage tank, the product in the tank should be removed.

If an obvious source or one or more likely sources have been found and further escape of liquids eliminated, further search should be suspended temporarily to determine if the suspected sources are the cause of the problem. During the period of suspension, monitoring and recording of the flow and amount of liquid should continue, and the vapor concentration should be checked at locations where contamination has occurred. It may be assumed that the source has been found and further contamination eliminated, only if there is a distinct and continuous decrease in vapors or liquid levels. The decrease may not show up immediately, since depletion of liquid accumulated underground may take days or weeks.

After a reasonable length of time, if the supply of liquid and vapors to the threatened area does not stop or show definite decrease, a further search for sources should be initiated.

The investigation should follow two paths: One is to test product storage systems and handling equipment, while the other is to trace the liquid underground from its point of discovery to determine the extent of the contamination, the direction of flow and the most likely source.

4.1 Sewer Investigation

If vapors are detected in a sewer, the sewer should be "backtracked" to determine the entry point of the contaminant. A combustible gas indicator equipped with a long sampling tube can be used to determine which sections of the sewer contain vapors. Vapor measurements should be taken directly above the liquid in the sewer. If a reading is obtained in a manhole, the next upstream manhole should be tested. This process should be repeated at each manhole, progressing upstream until no trace of the liquid or vapor is found.

Although vapors are heavier than air and will primarily travel downstream in the sewer, some vapors can travel uphill for a few hundred feet. This occurs more commonly during winter months, when the air in the sewer is warmed by the effluent and vents upward, as in a chimney. When backtracking a sewer with a combustible gas indicator, once the general upstream area where vapors are present has been determined, liquid samples from the uppermost manholes should be sampled to pinpoint the actual contaminant entrance.

Petroleum absorbent material can also be used to determine the contaminant's entry point. A petroleum absorbent pad should be clipped onto a length of string and secured to a rung in the manhole, so that the absorbent floats on the effluent. After a suitable time period, the material should be inspected to determine if petroleum products have been absorbed. By placing absorbents in several manholes in the suspected contaminant entry area, the point where the liquid product has infiltrated the sewer can be determined.

Once the entry point has been located, a recovery system, such as a well or trench, should be located nearby to intercept product before it can enter the sewer. The hazards of flammable and combustible liquids in sewers are discussed in Section VI.

4.2 Building Investigation

In some instances, the first indication of underground oil seepage is a report of hydrocarbon vapors in buildings, especially in below-grade confined spaces, such as basements. These vapors may be traced to liquid product collecting in sumps, seeping into underground sewer lines, or evaporating in the zone of aeration located several feet below the structure foundation.

Liquid product may travel for considerable distances through sewers or other underground conduits and can pose a hazard to all of the structures along the path of migration. Also, free oil spreading on the water table in the "pancake configurations" described in Section III can cover a wide area and threaten buildings around the spill site. For these reasons, structures adjacent to the location where hydrocarbons are first detected must be checked for infiltration of vapors or liquid petroleum products. Such a survey will not only serve to protect the lives and property of people in the spill vicinity, but may also roughly define the extent of underground migration and identify the path of seepage to which the source can be traced.

The safety considerations of handling hazardous vapors in a confined space are covered in detail in Section VI. It should be emphasized, however, that such areas must be checked by a qualified inspector, such as fire department personnel trained and equipped to detect and measure concentrations of combustible gases. Local police or fire officials are recommended for this purpose because they are more likely to obtain entry to private property, and they are more capable of conducting evacuations, if such action is necessary.

4.3 Product on the Water Table

As previously mentioned, the flow of liquids in soil and rocks is a complicated matter. Despite complexities, however, logic solves many problems of tracing liquids underground to their source. Almost all petroleum products are lighter than water and will float.

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When such liquids escape into the ground, they flow downward to the groundwater and float on top of it. An understanding of groundwater movement (Section I) is therefore basic to tracing underground product.

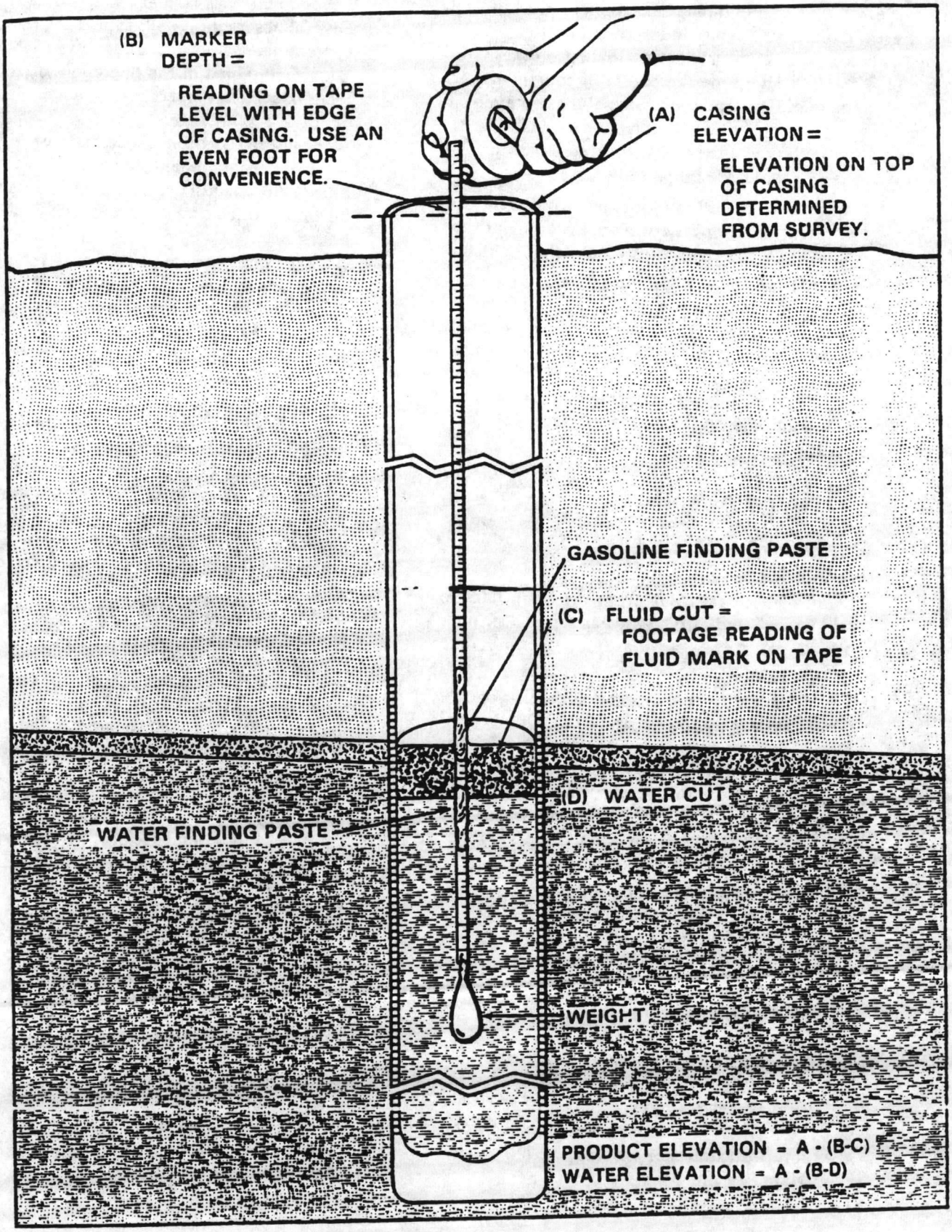
When a petroleum product is floating on the water table, one can determine the extent of contamination, the direction of flow, and the source of the contaminant by digging, or preferably drilling, observation wells. Prior to installation of the wells, covered in Section IV, several steps should be completed:

1. Permission should be obtained, preferably in writing, from property owners, including private individuals, the city, county, township or state.
2. Utility companies should be advised of the project, so that buried pipes and cables can be located. Often one telephone call to a "central utility notification number" will put a person in contact with individuals who can locate underground utilities. Facilities which should be located exactly and marked on the ground surface include:
   a. Gas pipes
   b. Water pipes
   c. Power cables
   d. Telephone cables
   e. Sanitary and storm sewers
   f. Oil pipelines.

   Service lines branching from the main lines to buildings should also be located, as well as other buried structures, such as fuel oil tanks and related piping.
3. The municipality's department of public works or similar agency should be contacted. Department employees can often provide valuable information, indicating the types of materials encountered during excavations, water table depths, and probable direction of flow. Copies of maps and diagrams of sewer systems and utilities should be requested.
4. Accurate topographic maps of the area as well as aerial photographs, if available, should be obtained. Common sources for such maps and photos include:
   a. United States Geological Survey
   b. The Soil Conservation District Offices
   c. The municipal tax offices
   d. The engineering or architectural firms which designed or built nearby structures
   e. Local surveyors
   f. The town or city department of public works
   g. Libraries, stationery stores, or look under "Maps" in the *Yellow Pages*.
5. All materials and equipment necessary to install the wells should be obtained. A check list of needed materials appears in Section V.
6. Several observation wells should be drilled in the contaminated zone and around its periphery, and a log maintained of the operation to record the types of soil, clay and rocks encountered, and the depth of groundwater.
7. After a well has been drilled and cased, groundwater and contaminant should be allowed to stabilize before depth measurements are taken. Stabilization will normally occur within two to 24 hours.
8. A bench mark should be established and the elevation of each well casing surveyed. These elevations must be exact, usually to 0.01 of a foot.
9. A steel measuring tape with a small weight affixed to the end should be used to determine the depth to the water table and the thickness of the layer of contaminant. Large weights should not be used, since they will displace the liquid and invalidate the measurement. The use of gauge sticks in holes with diameters less than 4 inches also should be avoided. The use of water finding and gasoline finding pastes will greatly increase the accuracy of such measurements. The mechanics of this procedure are described in Figure 11.
10. The measured depths should be subtracted from the surface elevation. This will produce the elevations of the fluid surfaces. By plotting the groundwater elevations on a map or sketch of the area, the direction of flow of the contaminant can be determined, since product floating on top of the water table will normally flow from higher to lower elevations.
11. By determining the area of contamination and the direction of flow, recovery systems may be located and installed where they will be most effective.
12. Once a test well has been installed, it normally should be covered and secured. The well may need to stay functional for several years, to allow for monitoring during the recovery program or thereafter.

4.4 Product Sampling

Correct methods of sampling and identifying hydrocarbons are essential, and can be crucial in identifying the source of petroleum spills. The samples must be taken in a manner so as to provide a representative specimen of the product.



11 — Method to Determine Water Table Elevation and Product Thickness

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Samples of product in liquid form or contained in groundwater can be used to determine the nature and the concentration of hydrocarbons. Product samples should be taken from the fluid surface by bailing or from a pump discharge.

Samples can be collected in either clean glass or metal containers, but metal containers have the advantage of not being easily broken. Suitable containers can be obtained from drug stores, supermarkets or laboratories. Lids or caps with aluminum-coated cardboard or teflon inserts should be used. Plastic, wax-coated or aluminum foil caps, lid inserts or seals should be avoided, because hydrocarbons can escape, be contaminated, or absorbed. Also, plastic or polyethylene bottles should not be used. All sample containers must be absolutely clean and free of foreign materials.

Sample bottles should be filled $^3/_4$ to $^4/_5$ full to avoid loss of floating oil and to permit the entire sample to be extracted, if required.

4.5 Water Sampling

Water samples may be obtained by thieving or pumping from selected depths. For extraction-type analyses, it is satisfactory to use gallon jugs, acid bottles (2.2 liter) or, in some cases, quart containers. Smaller samples are of little value for extraction, but are suitable for some of the newer analytical techniques. If the water sample cannot be analyzed within two hours after it is taken, it should be preserved against bacterial attack. This can be done by adding 5ml per liter of a solution of one part water and one part hydrochloric or sulfuric acid.

4.6 Labeling and Shipment

It is important to label the source of the sample and the conditions under which it was collected. Useful data, if applicable, for most product and groundwater samples include:

*a. Geographical location
*b. Source of collection
*c. Name of collector
*d. Date of collection
e. Witness
f. Point of collection (from pump or open water)
g. Principal use of the water
h. Water-bearing formation(s)
i. Depth to the water table
j. Depth of well
k. Diameter of well
l. Length of casing and position of screens
m. Yield of well in normal operation
n. Appearance at time of collection
o. Any other information that may assist in interpreting the sample.

*Minimum required information.

Labels should be attached securely to each sample container. The sample is of little value if this information is not available.

When shipping petroleum samples to the laboratory for analysis, it is necessary to observe all local, state and federal regulations regarding shipping of volatile hydrocarbons. Volatile hydrocarbon samples will not be accepted for transport by bus, passenger aircraft, U.S. mail or parcel post.

4.7 Detection of Hydrocarbons in the Field

Hydrocarbons in subsurface or surface waters can often be detected by sight, smell or taste. Refined products such as gasoline and distillate fuels can be nearly colorless and difficult to see, particularly in a thin film, unless they are colored. Residual fuels and crude oil are easily seen, as a rule, even in a very thin film. Extremely thin films may appear to be iridescent or silvery.

All but the most highly refined petroleum products, such as white oil or mineral oil, have a characteristic odor. An experienced person can often judge, to some extent, the type of hydrocarbon causing a particular odor. However, the sense of smell becomes fatigued quickly. An odor that "disappears" can create a false sense of security where vapors are involved. If hydrocarbon vapors have been detected by odor, further search should be made with an instrument for measuring combustible gas.

4.8 Identification Procedures

Because of the complex nature of petroleum and the difficulty in identifying a product source, laboratories skilled in the use of modern techniques should be consulted in the identification of unknown products. There are very few commercial laboratories that have such skill. It follows that methods to be used in the field are virtually nonexistent. Since identification usually consists of comparing unknown product to known products, the interpretation of such data should be left to persons who have the necessary experience. In all cases, the possible effects of weathering of light hydrocarbons must be considered.

There are two sources of methods generally accepted in the area of oil identification. One is the *Annual Book of ASTM Standards*. It contains specification tests for motor gasoline, aviation gasoline, aircraft turbine fuel, diesel fuel and fuel oils. Tests for heavy fuel oil are

generally applicable to crude oils. Not all of the specification tests are of importance in a spill situation. However, the series of methods for the analysis of waterborne oils is particularly appropriate to the identification of unknown oils.

The second series of methods particularly applicable to unknown oils is in the U.S. Coast Guard's *Oil Spill Identification System* (Report No. CG-D-52-77). Some of these methods are similar to those in the ASTM Standards on waterborne oils; however, the report also contains some more elaborate techniques

V. CLEANUP TECHNIQUES

After a spill or leak has been absorbed into the ground, a recovery system may be used to remove the product. Because many conditions affect migration and recovery of product, no single system works in all or even most cases. Therefore, recovery systems usually must be tailor-made for a particular spill or leak. As techniques for locating, containing and recovering free-floating product on the water table are extremely complicated, it is strongly recommended that recovery projects be directed by someone trained and experienced in this work.

5.1 Test Wells

Once it is known that product has reached the water table, the extent of the contamination and its potential environmental and safety hazards should be determined by drilling a series of test wells. The effectiveness of cleanup operations is greatly increased by establishing the area's soil characteristics, water table depth and gradient.

The first few test wells should be located near the probable source of the spill. Also, wells should be located near an affected area; for example, near a house with gasoline in the basement. If a test well reveals contamination, others must be drilled farther out, until the area of contamination can be fairly well defined. In large concentrated spills, the areas sloping upstream or to the sides of the spill should be investigated, since mounding of product can cause uphill migration. Site conditions may suggest other areas for test wells.

After a series of test wells has defined the scope of the contaminated area, it must be monitored periodically for product thickness and for spread of contamination. When necessary data on the spill area have been accumulated, a recovery plan can be devised.

5.2 Interceptor Trenches

Many spills into the ground encounter a high water table, impervious soil or a rock layer and remain near the surface. These spills may be contained and recovered with a trench, ditch or drain system designed to intercept the product (Figure 12).

In a shallow spill, it is normally possible to respond more rapidly and effectively with an interceptor trench or drain than by using a well system, since equipment and contractors for this type of installation are readily available in most areas and the recovery techniques are less complicated.

Trench-type recovery systems are generally limited to depths of six to 10 feet. Depths greater than these may be impractical due to soil conditions, the capabilities of normally available excavating equipment and the large amount of soil which must be removed.

A ditch should be constructed across the entire front of the migrating body of oil. If product has entered a confined structure such as a building or sewer, the trench should be dug as close as possible to the structure without damaging its basement or foundation.

If soil conditions will permit, ditches should be kept as narrow as the bucket on the excavating equipment, and should be constructed to a depth of one to four feet below the water table surface. The downstream wall should be lined with an impermeable material such as polyethylene film (Figure 12) to block floating oil but permit water to pass below. The barrier material should be placed a minimum of a few feet above the product level and a minimum of one foot below the oil/water interface. If the ditch will be used as a withdrawal point to lower the water table, the barrier must be situated deep enough to intercept the product at the lowest drawdown level. As it usually is advisable to fill the ditch with coarse material, such as crushed stone or gravel, the film must be of sufficient strength to prevent puncture or tearing.

One or more randomly slotted culvert pipes, or similar material wrapped with plastic window screening, should be lowered to the bottom of the trench. The bottom of the culvert should be capped to prevent silt build-up. Once the culvert is in place, the ditch should carefully be filled to within two feet of the native ground surface with a very porous material, such as crushed stone or gravel. Soil should then be used to fill the remainder of the trench.

Groundwater can be removed from the trench to influence the flow of product, or—if left open—the trench

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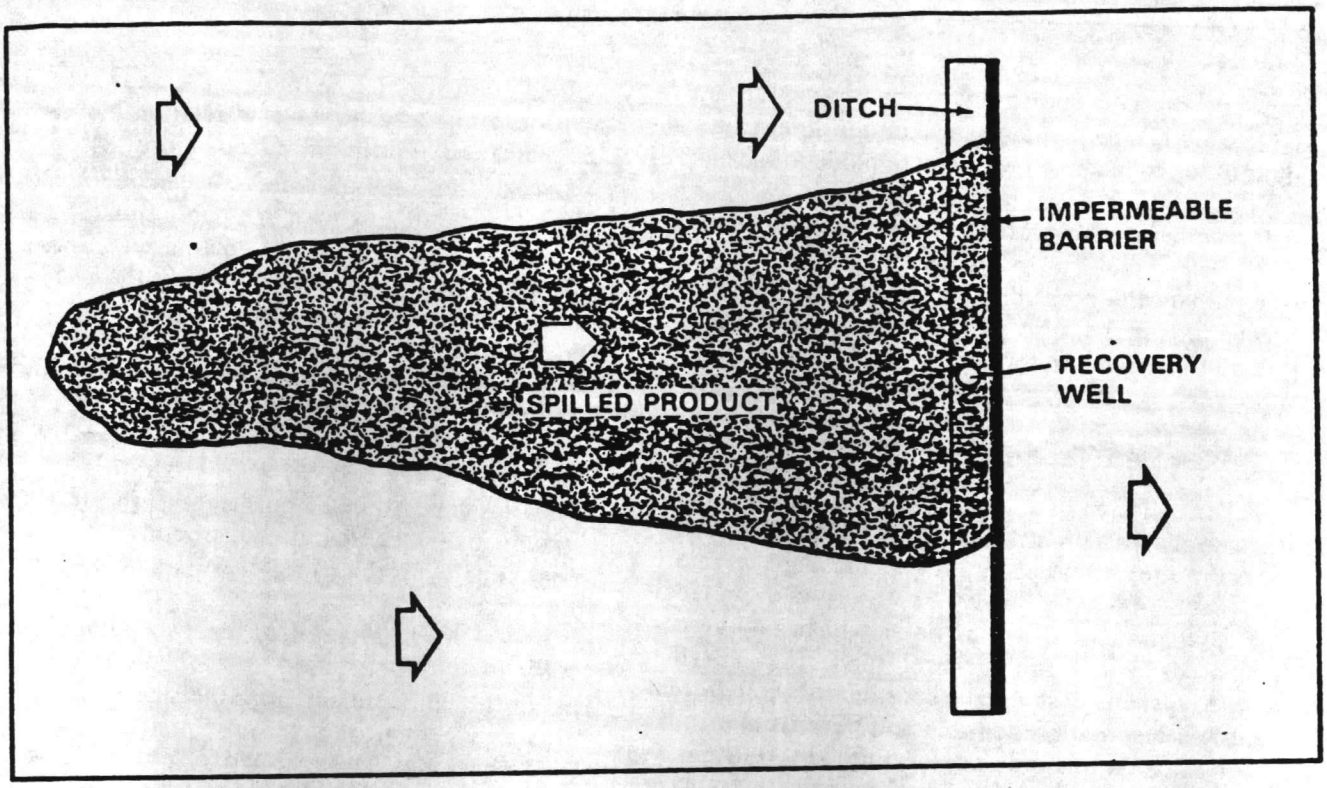
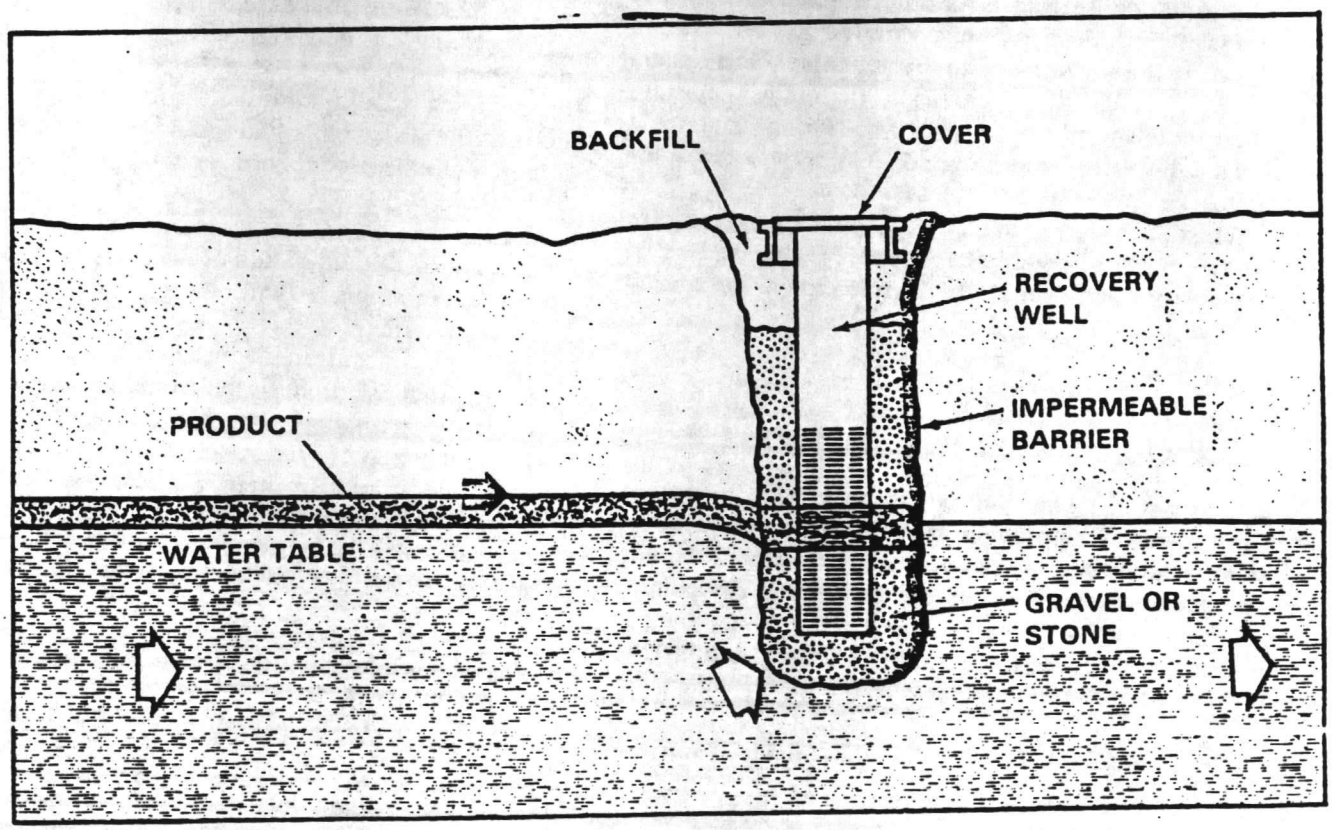


PLAN VIEW



CROSS SECTION

Figure 12 — Interceptor Trench

can serve as a collection point for skimming. It is important to note that pumping or skimming must be continuous, or collected oil will tend to move to the ends of the ditch and pass around the barrier.

If an open trench is used to contain a spilled product on the water table, all safety precautions must be taken to eliminate the possibility of explosion or fire. Safety precautions must also be observed when selecting pumping equipment for use in flammable liquids or vapors.

5.3 Pumped Trenches

The installation of a pumped intercepting system will increase the area of influence of the collection trench by lowering the water table, thus increasing the rate of recovery. Pumping to lower the water table can create excessive amounts of waste water which may be contaminated by the spill. Therefore, before installing pumped systems, it should be considered whether treatment and disposal are feasible and permissible.

Construction procedures for pumped trenches or drain systems are similar to those for gravity drainage. The primary difference is that the interceptor trench or drainage pipe needs to be excavated to greater depth to allow for the lowering of the water table. This system can be designed to automatically maintain a constant water table within the trench for collecting, containing and skimming the migrating oil running into the interceptor trench.

When it is determined that a pumped interceptor system may be required, a knowledgeable and experienced contractor should be consulted on its design and installation.

5.4 Well Systems

Mobile product will normally be better contained and recovered with properly designed continuous-pumping recovery wells. They can be designed with the proper size, depth and pumping rate to create an adequate cone of depression in the water table thereby containing the oil and influencing its flow to the recovery point.

If the water table is nearly horizontal, a shallow depression will suffice to confine the floating product. If the water table is inclined, as is common, the cone must be deep enough to reverse the gradient. The point at which the reversal occurs, called the "divide," must lie beyond the contaminated area in order to contain the oil.

Once a well is installed, a depression cone of considerable extent normally can be created in a matter of minutes or hours. In most cases, this is enough time to install a recovery system before mobile product can be carried out of reach by moving groundwater. The importance of the drawdown in relation to the gradient also must be kept in mind (see Figure 13).

Although a cone of depression can be maintained by continuous pumping with one pump situated below the surface of the water table, floating oil will not be recovered unless it is drawn down to the pump's withdrawal point. It is, therefore, important when using a single recovery pump to locate it at a depth where it will both lower the water table and skim collected product. As a minimum, the effluent from such a system must be directed into an oil/water separator. At times, it may be necessary to set two or more separators in series to allow for further water purification. In some cases involving badly contaminated groundwater, additional treatment of produced water will be necessary prior to discharge.

As a rule, it is better to use two pumps instead of one—a pump to maintain the cone and a smaller one to pump the contaminant from the surface of the water. This arrangement reduces or eliminates the volume of fluid which must be separated for proper disposal. This also allows pumping of noncontaminated groundwater to a point of free discharge.

Depending on the seriousness of the spill, pumping may be required for an extended period of time. Ideally, pumping should continue through several fluctuations of the water table and should be abandoned only after the mobile product has been reduced to an acceptable level.

Creation of an unnecessarily large cone of depression may result in contamination of the soil and water table to a greater depth. It will also produce an excessive volume of water.

Spills in a concentrated area where trenches or drains are not practical or desirable sometimes may be recovered by pumping from contaminated test wells. Periodic removal of product accumulated in these wells may be adequate to contain and recover the product. Pumping of the test wells can also create a cone of depression in the water table to increase the recovery rate.

5.5 Effects of Pumping

The objective of the drawdown well is to establish a depression in the water table that prevents the oil from spreading and concentrates it for removal. The rate at which fluid is withdrawn and the permeability of the soil determines the size and rate of development of the depression.

Since permeability varies, the depression-forming process is different in all areas. When enough informa-

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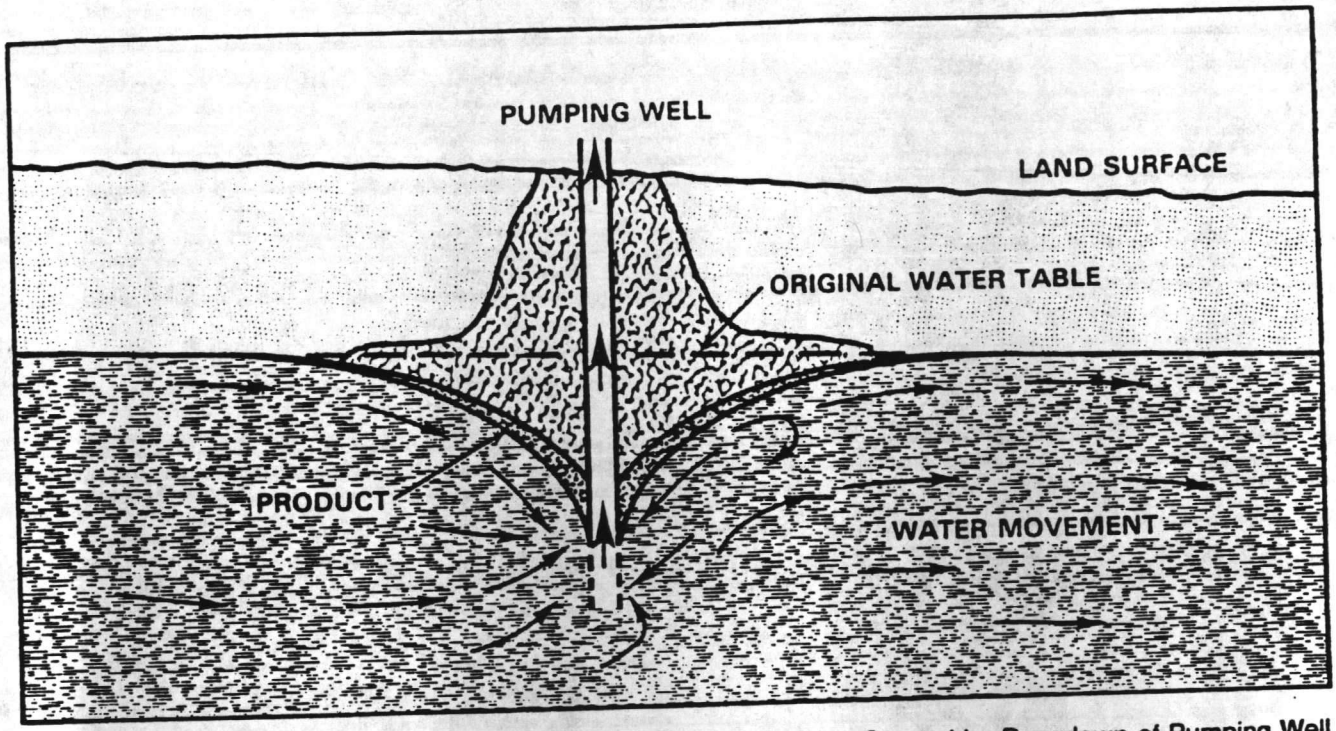

Figure 13 — Oil on Water Table is Trapped in Cone of Depression Created by Drawdown of Pumping Well

tion is known about an aquifer, the behavior of the depression cone some distance from the well can be calculated quite accurately. Within 100 to 200 feet of the well, however, such calculations are unreliable because of local characteristics of the aquifer.

A standard procedure is to sink two or three monitor wells in one or more straight lines away from the recovery well. Fluid levels in these wells can be observed to determine the exact time and amount of drawdown. From these data, expansion of the depression cone can be predicted. Withdrawal rates should be adjusted to maintain a cone only large enough to contain the oil.

5.6 Well Drilling Equipment and Techniques

When it has been determined that either test wells or recovery wells are to be installed, the size and depth of holes will determine the drilling equipment that should be used. Care should be taken to use equipment capable of installing wells to required specifications. Use of expensive equipment should be avoided where it is not required.

In virtually every area where groundwater is used, well drillers can be found who have drilling equipment for installing both test wells and recovery wells. In urban areas, equipment can be obtained from foundation testing contractors or soil testing firms. Although hand-operated equipment is available which can be useful in certain circumstances, commercial drilling equipment is generally more suitable.

5.7 Well Completion Techniques

Casing is necessary in test and recovery wells. Any steel, polyvinyl chloride (PVC) or other strong pipe or tubular product may be used. PVC pipe is usually recommended, as it is readily available, light, easy to handle, relatively inexpensive and available in diameters from one to 18 inches. This pipe also can be purchased factory-slotted (known commercially as "well screen") or perforations may be cut in the field. Acrylonitrile-butadiene-styrene (ABS) pipe should not be used, as it tends to become brittle with weathering and dissolves upon contact with petroleum hydrocarbons.

Test wells typically range from 1 to 4 inches in diameter. They should be installed to a minimum depth of about five feet below the probable low water table. The slotted or perforated section of pipe, known as the screen, should extend both five feet above and below the water table to assure the fluctuation of the water table will be within the perforated section. This will allow the product to migrate into the pipe.

Table 1 — Basic Well Drilling Methods

DRILL TYPE	NORMAL DIAM. HOLE	MAX DEPTH	AVERAGE TIME PER HOLE	NORMAL EXPENSE	ADVANTAGES	DISADVANTAGES
1. Rotary	4"-20"	Unlimited	Fast	Expensive	1. Good for deep holes 2. Can be used in soils and relatively soft rock 3. Wide availability 4. Controls caving	1. Need to use drilling fluid 2. Potential bore hole damage with drilling fluid 3. Requires drilling water supply
2. Stem Auger	4"-8"	30-50 ft.	Fast under suitable soil conditions	Inexpensive to moderate	1. Widely available 2. Very mobile 3. Can obtain dry soil samples while drilling	1. Difficult to set casing in unsuitable soils (caving) 2. Cannot penetrate large stones, boulders or bed rock 3. Normally cannot be used to install recovery wells
3. Hollow Stem Auger	4"-8"	30-50 ft.	Fast under suitable soil conditions	Inexpensive to moderate	1. Good for sandy soil 2. Can set casing thru hollow stem 3. Very mobile 4. Can obtain dry soil samples and split spoon samples 5. Controls caving	1. Casing diameter normally limited to 2"-3" o.d. 2. Cannot penetrate large rock, boulders or bed rock 3. Limited availability 4. Normally cannot be used for recovery wells
4. Kelley Auger	8"-48"	90 ft.	Fast	Moderate to expensive	1. Can install large diam. recovery wells 2. Drills holes with minimum soil wall disturbance or contamination 3. Can obtain good soil samples	1. Large equipment 2. Seldom available in rural areas 3. May require casing while drilling
5. Bucket Auger	12"-72"	90 ft.	Fast	Moderate to expensive	1. Can obtain good soil samples 2. Can install large diam. recovery wells	1. Hard to control caving 2. At times must use drilling fluid 3. Normally very large operating area required
6. Cable Tools	4"-16"	Unlimited	Slow	Inexpensive to moderate	1. Widely available 2. Can be used in soil or rock	1. Slower than other methods 2. Hole often crooked 3. May require casing while drilling
7. Air Hammer	4"-12"	Unlimited	Fast	Expensive	1. Fast penetration in consolidated rock	1. Inefficient in unconsolidated soil 2. Very noisy 3. Control of dust/air release 4. Excessive water inflow will limit use
8. Casing Driving (well point)	2"-24"	60 ft.	Slow to moderate	Inexpensive	1. Very portable 2. Readily available	1. Limited to unconsolidated soil —cannot penetrate large rocks, boulders, bedrock 2. Difficult to obtain soil samples 3. Generally inefficient method to install recovery well
9. Dug wells	Unlimited	10-20 ft.	Fast	Inexpensive	1. Readily available 2. Very large diam. hole easily obtained	1. Caving can be severe problem 2. Limited depth 3. Greater explosive hazard during excavating into hydrocarbons

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The size and location of the perforations are dependent on the soil characteristics and gravel-packing around the exterior of the well pipe. Factory slotted PVC pipe should be used when possible. A Schedule 40 PVC pipe with random slots of twenty-thousandth of an inch (0.020) will handle most soil conditions. When properly gravel-packed, it minimizes or eliminates the infiltration of fine sands or the need for additional screening.

Gravel-packing is important to establishing a good well. The test well hole should be drilled a minimum of 4 inches larger than the test well pipe diameter. The area outside of the pipe should be packed uniformly with coarse masonry sand, pea gravel, one-fourth inch crushed rock, or quartz blasting sand larger than the screen perforations.

The bottom end of the pipe should be capped. The top may be above the ground level and capped to keep debris out of the well. However, security and safety considerations may require that the top of the casing be set below ground level. Each well should be vented with ¼" hole in the cap or at the top of the casing.

Proper installation of a recovery well is critical. The installation is similar to that of a test well, but there are important differences. A recovery well will normally be larger in diameter to accommodate the pumps and controls designed for recovery operations, and extended to greater depth below the water table. The depth will depend on the aquifer and soil characteristics, the area of contamination and the area of the cone of depression. Figures 14 and 15 illustrate proper installation of test and recovery wells. To eliminate expenditures for wells or equipment that may be unnecessary or may not perform as planned, recovery well design should be left to professionals.

5.8 Emergency Recovery Systems

When underground flammable or combustible liquids are creating hazardous conditions by entering buildings, underground utility vaults or sewers, the immediate installation of a recovery system often will be necessary. In such cases, systems constructed from materials commonly available in most communities can be used during the period required to install test wells and design and construct a permanent recovery system.

A recovery system employing readily available materials, as shown in Figure 16, usually can be placed in operation in the matter of a few hours. It utilizes a length of culvert pipe, with randomly located torched or cut perforations, which is wrapped with ordinary screen. As well-drilling equipment often is not available on short notice, a backhoe usually is used to excavate to the water table and contaminant.

Once such a well is in place and significant amounts of petroleum products are encountered, a vacuum truck can be used to recover the bulk of the contaminant. It is not recommended, however, that vacuum trucks be used for extended recovery. Their use should be limited to the initial emergency period or during the time necessary to install an adequate pumping system.

Quickly installed emergency recovery systems often make use of a single submersible or suction pump, such as those used at service stations. With a single pumping system that recovers both groundwater and floating product, it is necessary to construct a separator to process the oil/water mixture. A 55-gallon drum or fuel oil tank can be adapted to separate such mixtures by standard pipe and fittings available from a plumbing supply company. A shop-built, temporary separator of the type shown in Figure 16 can be constructed in an hour's time with common welding equipment.

Although systems utilizing such materials may be invaluable during the time of an emergency, a permanent system designed by a person knowledgeable in subsurface petroleum recovery should be installed as soon as possible, and the initial system removed or properly abandoned.

5.9 Well Pumping Equipment and Techniques

In an emergency, any safe means of pumping may be used. As soon as possible, however, a submersible or positive displacement pump should be installed. Submersible pumps are available that can operate in wells as small as 4 inches in diameter. Discharge capacities range from a few gallons to hundreds of gallons per minute, depending on pump size, casing diameter and well depth. Submersible pumps are most suitable for this type of operation, but they must be properly installed and maintained, as some will burn out quickly if operated dry.

Pumps should be ordered with the maximum gallons per minute (GPM) flow rates anticipated for establishing the depression cone and for the desired product recovery rate. Flow rates can be reduced by valve controls, if necessary.

When ordering pumping equipment, it should be made certain that the supplier is aware of the proposed use, so that proper seals, impellers, gears, etc. may be provided. Most fractional horsepower pumping equipment has plastic, fiber or metal impellers and gears that may not be compatible with certain hydrocarbons.

When using positive displacement suction pumps,

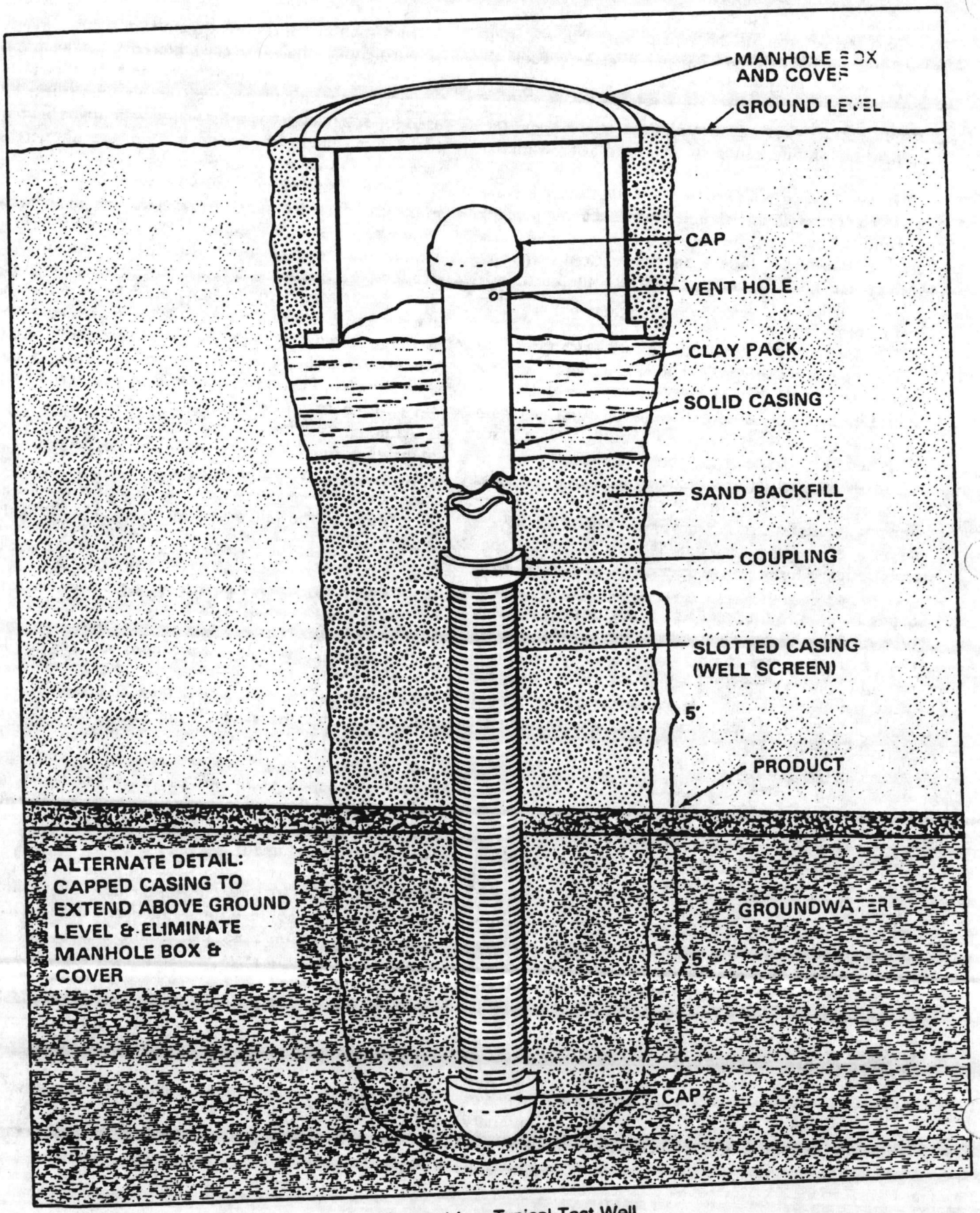

Figure 14 — Typical Test Well

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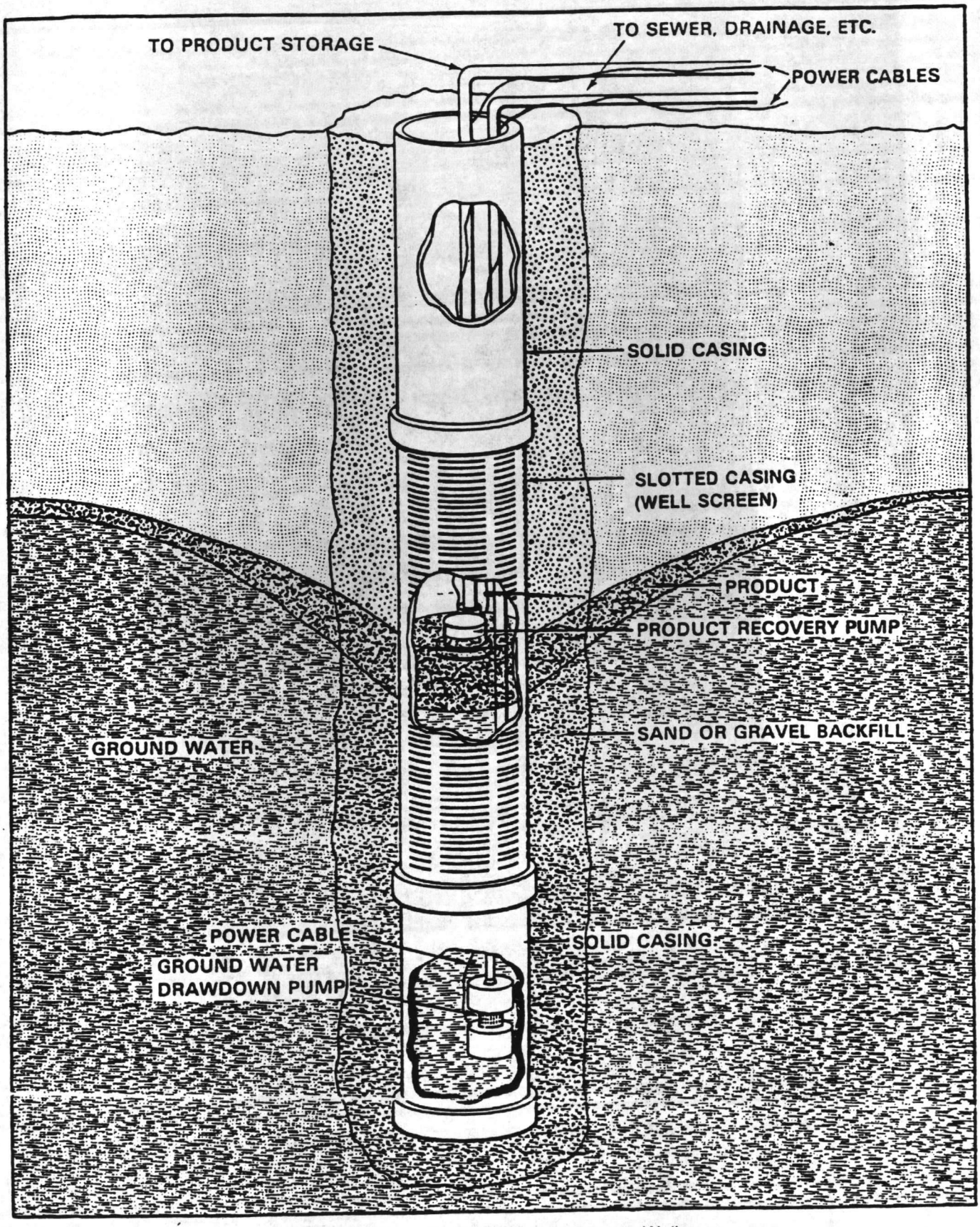


Figure 15 — Double Pump Recovery Well

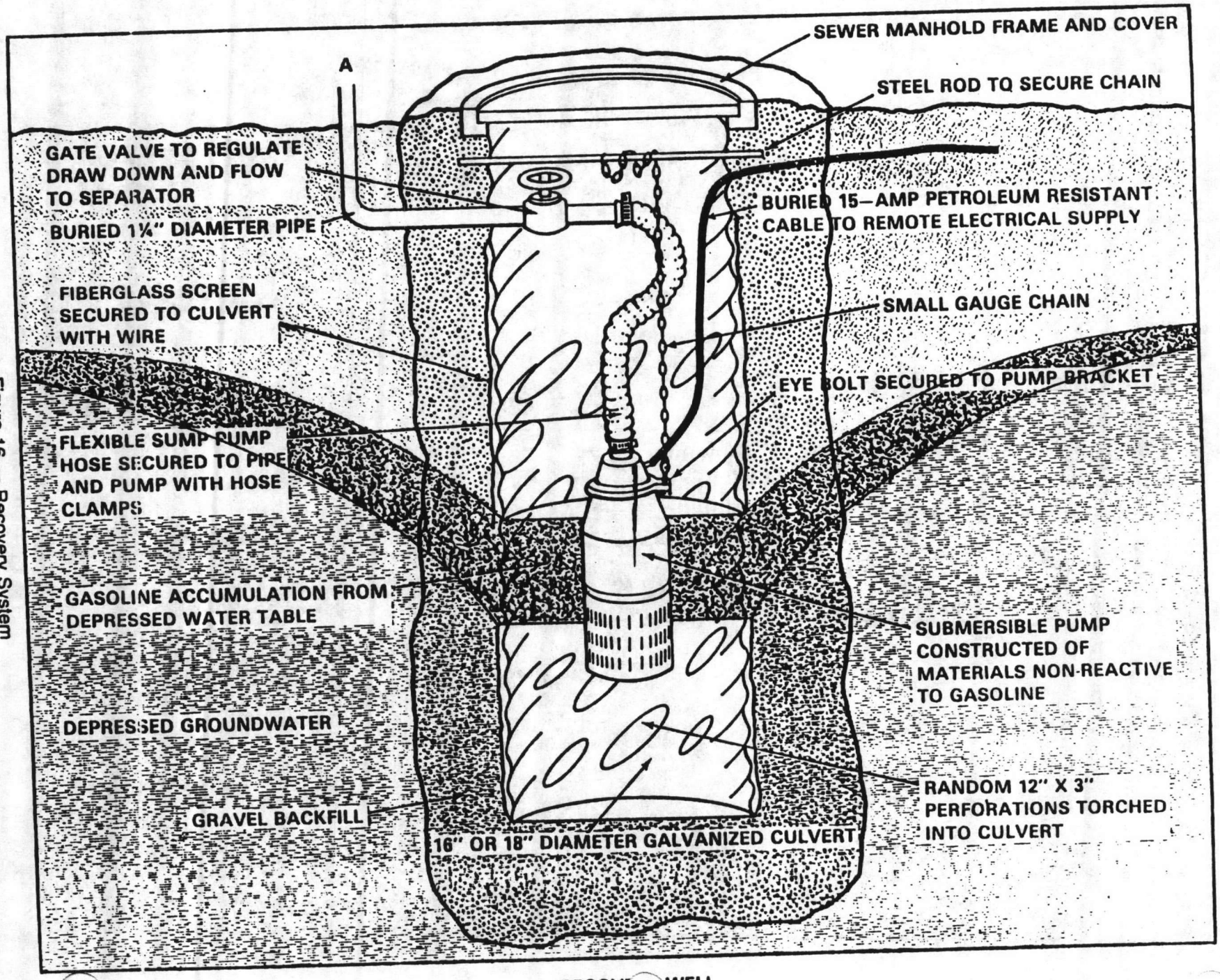
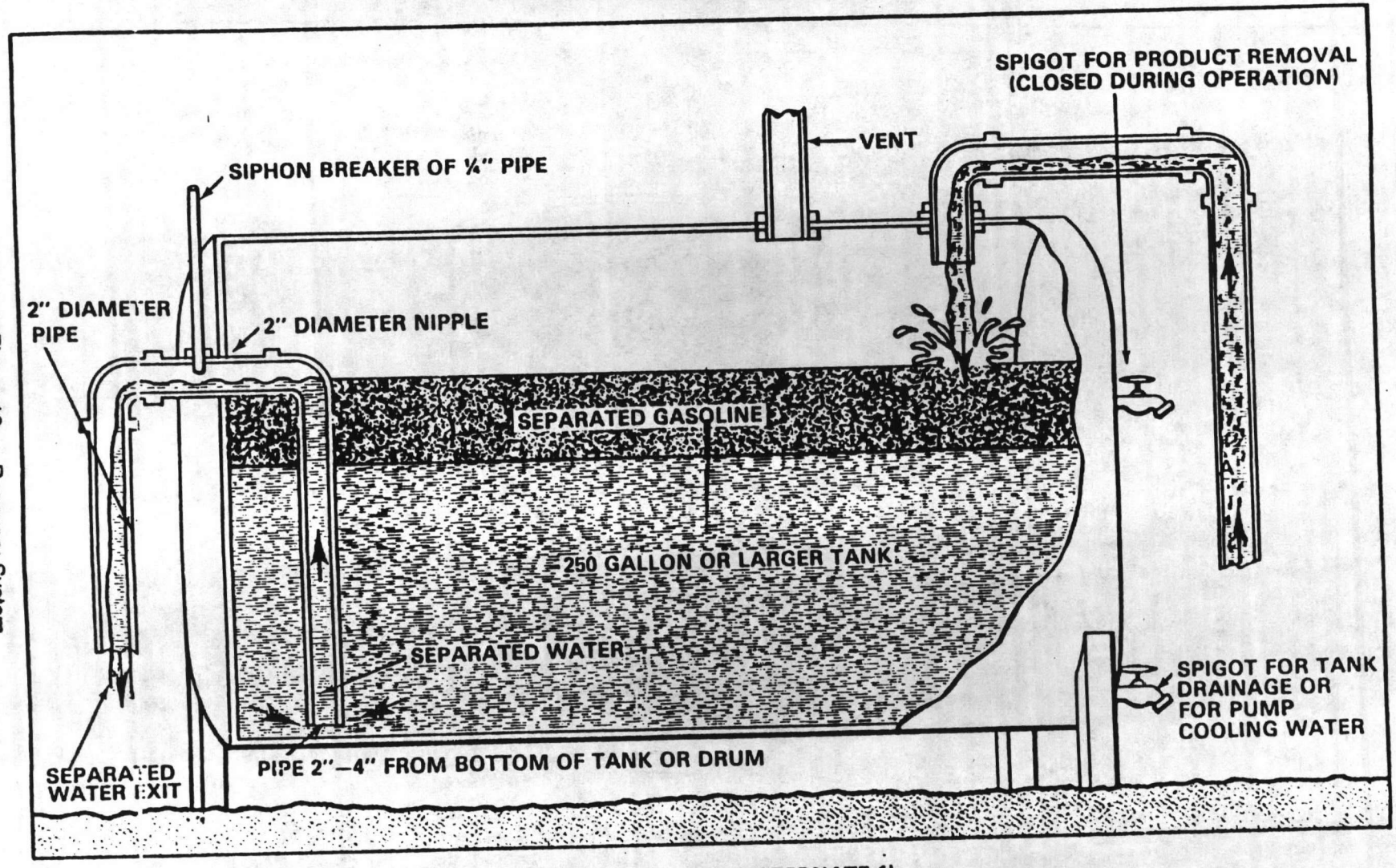


Figure 16 — Recovery System



TANK SEPARATOR (ALTERNATE 1)

Figure 16 — Recovery System

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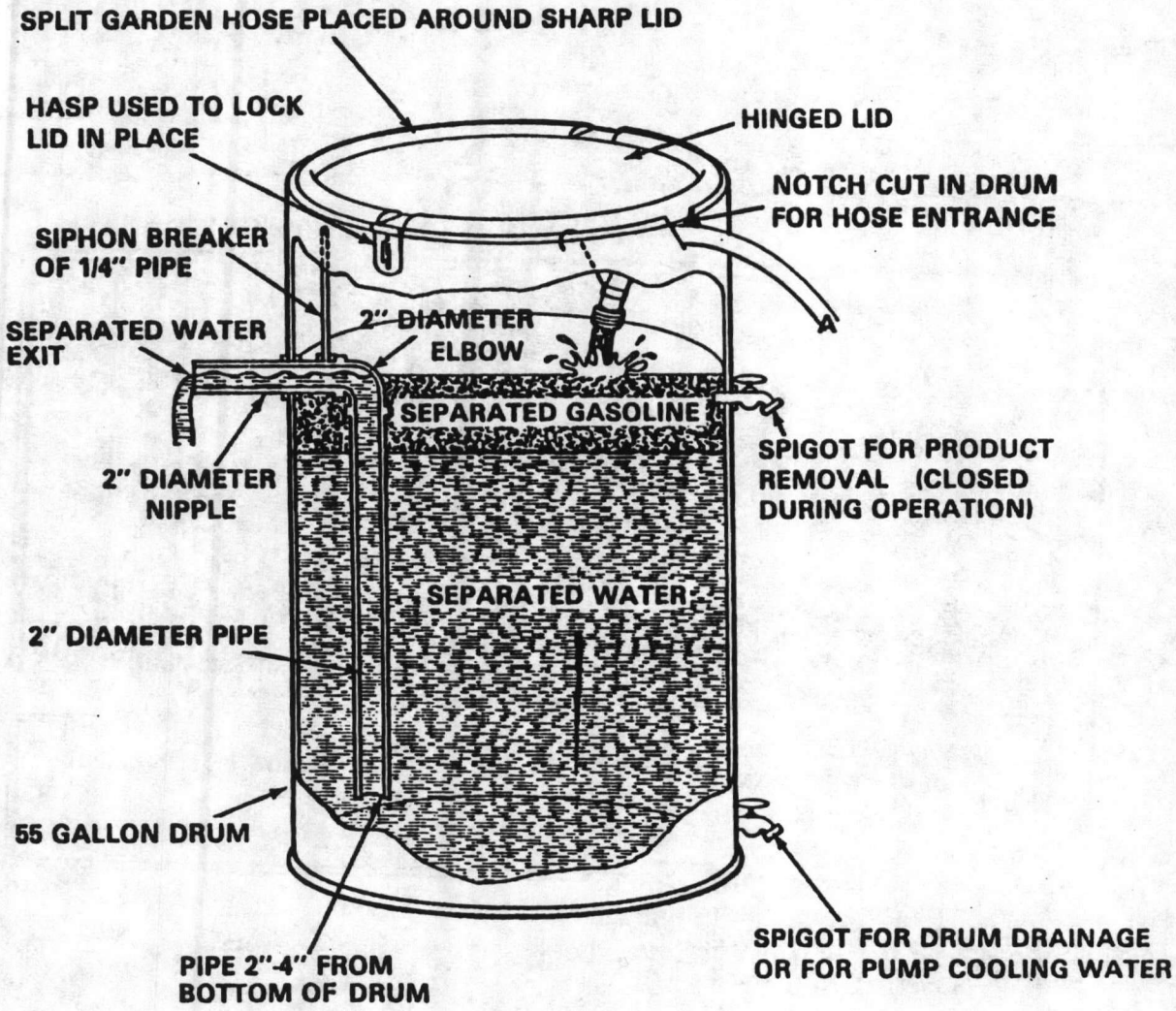

DRUM SEPARATOR (ALTERNATE 2)

Figure 16 -- Emergency Recovery System

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protective screening or a filter ahead of the pump should be used to protect it from dirt or debris. High-speed rotary pumps should be avoided when pumping combinations of oil and water since they encourage formation of oil-water emulsions, that are difficult to separate.

Where extended recovery operations are anticipated, an automated system should be designed and installed. Automated systems will reduce the number of man-hours required to operate and monitor the recovery operation. They also can maintain a continuous depression cone necessary to contain and recover the product.

Precautions should be taken in the design and installation of recovery systems to eliminate the risk of explosive vapors in the area of pumping operations. One technique is to keep the pump unit submerged in liquid at all times. Electrical cable for pumps and automated float control systems must be of materials that are unaffected by the liquids or vapors which will be encountered. All cables from pumps to the power should be continuous with no intermediate connections. The power source connection should be a minimum of five feet from the well opening.

Electrical pumps or gasoline powered engines should not be used within five feet of the recovery well opening, unless they are classified explosion-proof for Class I, Division I, Group D use in accordance with NFPA-30. Suction pumps used on volatile products from test or recovery wells should be explosion-proof regardless of their distance from the well.

5.10 Recovered Product and Waste Water

Recovered product which is only slightly contaminated with waste water normally can be stored in tanks on site, or placed in trucks that will haul it to acceptable disposal facilities for reclamation.

Treatment and disposal procedures of recovered waste water will depend on the volume of water produced and its degree of contamination. Large volumes of contaminated waste water may be too difficult and costly to transport to an acceptable disposal facility. In such cases, it will be necessary to construct an on-site treatment unit or redesign the recovery system to reduce the volume of produced water.

Uncontaminated groundwater produced from a drawdown pump may be disposed into sanitary or storm sewer systems or into ditches or streams with appropriate approval. Proper well design can assure that excessive drawdown does not occur and that contaminated water or product will not be discharged.

Before recovery equipment is designed and placed in operation, approval should be obtained from necessary authorities for the disposal of treated waste water into a storm sewer or surface drainage system. Normally, this requires approval by the local or state fire marshal and a state environmental agent or the Federal Environmental Protection Agency (EPA). When designing waste water treatment facilities, the volume of water to be treated and the requirements of authorities must be considered. As there are many requirements for permission to discharge, and a violation can void permits, a professional should be consulted during the design of sampling, collection, monitoring and treatment facilities.

5.11 Avoiding Common Problems in Recovery Operations

Some common problems encountered during recovery operations may be avoided by considering the following:

a. Recognize that mobile product, as it moves down to the water table or other natural barrier, will seek an escape route from the spill area by every means available, including sewer lines, underground utility lines or vaults, drain fields and basements.
b. Determine the source of a spill and eliminate its continued contribution to the hazardous conditions or to the contamination of the environment.
c. Install an adequate number of test wells to determine the full extent of the area of contamination. The cost of additional test holes will be far less than having the drilling equipment return.
d. Install test wells deep enough into the water table to determine both the product levels and the water level.
e. Use well screen or properly perforated pipe in test wells, so that the product on the water table can be measured accurately.
f. Use gravel packing when recovery or test wells are installed. Proper packing helps ensure the efficiency of wells.
g. Prior to installing a recovery well, determine if the dewatering for a depression cone will contaminate additional areas or create problems in adjoining buildings.
h. Obtain the necessary approvals for discharge of the waste water produced from recovery wells.
i. Install recovery wells that both contain and recover the mobile product.
j. Use equipment that is suited for the recovery project. The use of improper equipment often will cause excessive loss of time and may increase the cost of the recovery project.

k. Inform the appropriate local, state and federal agencies of spills and environmental hazards.
l. Obtain professional advice when needed.

5.12 Biological Degradation

Biological degradation, natural degradation or biodegradation of petroleum is the decomposition of petroleum components by microbes, principally bacteria. These bacteria are common in surface soils and waters. Microbes use the hydrocarbon present in petroleum as sources of carbon and energy—in effect, as food.

Petroleum components differ in their susceptibility to microbial attack. Crude oils consist of hydrocarbons, as well as nonhydrocarbon compounds. Refined petroleum products, such as gasoline, jet aircraft fuels and lube oils, contain fewer nonhydrocarbon components than crude oils and are, therefore, more susceptible to biodegradation.

To consume the hydrocarbons, or food, to any appreciable degree, the bacteria must have access to adequate oxygen, moisture and nutrients, in addition to carbon. The biodegradation of oil is an oxidative process requiring free oxygen. Aerobic bacteria—those requiring free oxygen—have been found several thousand feet beneath the ground surface, but at such depths they do not have enough oxygen to decompose petroleum at any significant rate. Anaerobic bacteria—those that can live without oxygen—are also found at the subsurface, but they degrade petroleum at a very slow rate.

In addition to needing oxygen, biodegradation also requires certain nutrients. These especially include nitrogen, commonly in the form of ammonia, and phosphorus, in the form of phosphates. Other nutrients are needed in smaller amounts and, in effect, constitute fertilizer for the microbes. They often occur in mineral form and are known generally as "mineral nutrients." When an oil spill occurs, the number of "oil-eating" bacteria in the contaminated area increases markedly. However, the degree of growth can vary depending on the amount of nitrogen and phosphorus available in the soil.

Bacterial growth in soil is also affected by moisture. In completely dry soil, bacteria cannot grow. Bacteria grow best, and thus degrade hydrocarbons best, in moist, crumbly soils. Nature, as a rule, ultimately supplies the moisture and nutrients needed for bacterial growth. However, as a process for removal for petroleum, natural biodegradation is extremely slow—primarily because of the lack of oxygen. But growth of bacteria, like plants, can be promoted by encouraging the growth conditions artificially.

5.13 Biostimulation in Groundwater

In the bioreclamation of groundwater contaminated with a petroleum product, it is first necessary to conduct a laboratory study to determine the kinds and amounts of mineral salts required to obtain maximum growth. Such a study is needed because, at times, it is necessary to add small quantities of several trace minerals, in addition to the usual nitrogen and phosphorus, to obtain maximum growth of bacteria.

Once the optimum growth conditions have been established, air injection and producing water wells should be installed under the direction of a competent groundwater geologist. Since the success of the cleanup is dependent on controlling the movement of the groundwater, all wells have to be constructed with sufficient screen at the water table to allow for fluctuations from weather conditions and pumping.

All biostimulation projects require large volumes of air to be injected into the contaminated system. Diffuser devices should be used to increase the dissolved oxygen concentration in the groundwater. The size of the compressor and the number of diffusers required are determined by the quantity of product to be biodegraded and the duration of the treatment period.

Distribution of the nutrient solution (nitrogen, phosphorus and trace minerals) can be on a batch or continuous basis, however, batch addition is more economical and has been shown to be satisfactory. Analyses of water from injection and producing wells are required on a weekly schedule to control growth-optimizing concentrations of minerals in the aquifer, and to be certain that any discharged water meets appropriate standards. Bacteriological analyses on selected well waters normally is carried out at frequent intervals to check on the response to air and nutrients.

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VI. SAFETY

Most petroleum products are flammable liquids and may be explosive when confined. When leaked or spilled, they can create a definite fire and explosion hazard. The danger may be increased if people unfamiliar with the physical characteriestics of flammable liquids attempt to handle the problem.

The problems created by oil seepage vary widely, and the step-by-step procedures for handling them will vary accordingly. Certain broad guidelines discussed in this chapter nevertheless can be applied to most such situations to protect life and property.

It should be clearly understood that safety is an extremely complex subject. Consequently, not all aspects of safety are covered in this manual. For a more thorough coverage of safety precautions and actions to be observed, consult the current edition of the National Fire Protection Association recommended practice, "NFPA 329, Underground Leakage of Flammable and Combustible Liquids."

Petroleum products in basements, subways, tunnels, sewers, utility conduits, or groundwater usually will be reported because of an odor. A quick, reasonable effort must be made to determine the degree and extent of the problem, and judgment must be exercised to protect life and property without creating unnecessary alarm.

Gasoline and most refined petroleum products have a strong distinctive odor. They can be detected in extremely low concentrations when they pose no hazard of explosion and fire. If vapors or liquids have been detected in a confined structure and a rapid assessment indicates the potential danger of explosion or fire, the following general safety measures should be taken at once:

1. All people should be kept way from the danger area, except those properly trained and equipped.
2. The local fire department should be alerted.
3. A trained operator of a combustible gas indicator should determine if vapors are present, and, if so, their concentration.
4. If the combustible gas indicator confirms the presence of dangerous concentrations of flammable vapors or if liquid or vapors are increasing to dangerous levels, the following procedures should be implemented:
   a. Those responsible for the building or facility should be notified and the danger area isolated.
   b. Sources of ignition should be eliminated.
   c. Confined areas should be ventilated with proper equipment and procedures to remove flammable vapors.
   d. Points of entry of liquid or vapor should be sealed off.
   e. Proper authorities should determine if vapors or liquids have entered neighboring confined structures including, buildings, sanitary and storm sewers, and telephone vaults.

Those responsible for the endangered building or facility often can provide a logical explanation for the problem and possibly a solution. They are familiar with the facility and with the normal storage sites for the fuels that serve it. They may know of some recent incident that might have caused the problem, or the problem may have occurred before. The responsible persons also can most effectively eliminate sources of ignition and isolate the danger area to protect human life.

Persons in charge of nearby petroleum storage and handling facilities, such as service station or bulk plant managers, usually are well informed on how to handle petroleum products safely under various conditions. When advised of the problem, whether or not their own facilities are involved, they may be able to advise or assist in initiating prompt corrective action.

When danger to life and property has been confirmed by a combustible gas indicator, or is otherwise obvious, steps must be taken to protect people in and around the area. The nature of the facility will dictate the specific safety measures required.

When hydrocarbons are entering a building basement, the evacuation of all people in and around the danger area, and possibly the entire building, must be considered. The owner or manager normally is best prepared to handle the evacuation. The building engineer or maintenance supervisor may be very helpful with additional safety measures, such as eliminating sources of ignition. If the hydrocarbons are in the basement of a private home, the occupants should remain outside until qualified personnel determine that no danger of explosion or fire exists.

When product vapors are detected in buildings, a quick inspection will often reveal their point of entry is a floor drain with a dry trap. Water should be poured into the drain to fill the trap, thus shutting off the entrance of the vapors into the building.

Sewer service connections in some older buildings were not constructed with traps. For these drains, a plumber's plug, a layer of plastic film such as polyethylene, or a section from a shower curtain can be used

to cover the drain, and the material can be secured with heavy objects such as bricks. To obtain a more vapor-tight seal, tub caulking or a similar substance can be applied between the floor and the film.

When the drain has been effectively sealed, care should be taken to notify the owners of other structures situated "downstream" on the sewer line to be aware of the same potential hazard and to follow the same procedures. The sewage treatment facility also should be advised that a flammable liquid has entered the sewer system, so the product can be bypassed or skimmed before it reaches the treatment facility.

Flammable liquids or vapors also find their way into basements or other subsurface facilities around utility pipes or conduits, or through cracks in floors or walls. Caulking or plugging these openings often will stop the flow or reduce its rate. If seepage through a basement wall cannot be stopped from the inside, it may be necessary to dig down on the outside of the foundation and seal the opening there.

Electrical switches in the exposed area should be left untouched to avoid arcing that might ignite the hydrocarbons. Extension cords should not be plugged in; if already plugged in, they should not be unplugged. Power to the exposed area should be controlled only at switches or outlets located in a safe area.

Gas service should be cut off outside the endangered structure to extinguish pilot lights and burners. Power to heating units that are electric or have automatic electric ignitors should be disconnected at points outside the exposed area until the heating units or ignitors are disconnected.

Fans and pumps used to remove vapor and liquids from the area should be powered by explosion-proof motors. Vapors should always be vented out of the building; air should not be ventilated into the structure.

Smoking near the area should be prohibited, and workers should be required to leave matches, lighters and smoking materials in a safe area.

Workers entering any confined area where hydrocarbon vapors exist in significant quantities must be equipped with a self-contained breathing apparatus consisting of a full face mask and air supply. Filtering or chemical masks are not to be used in a confined space because the atmosphere may contain insufficient oxygen.

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Ref: (a) NAVFACENGCOM ltr 1121A/TJZ of 24 Nov 1982 (NOTAL)

Encl: (1) CNO ltr ser 451/399355 of 17 Dec 1981
(2) Procedures for Disposal of Hazardous Material Spill Residues through DLA

1. Reference (a) forwarded enclosures (1) and (2) which were developed by the Navy and the Defense Property Disposal Service (DPDS) concerning implementation of DOD policies pertaining to Hazardous Material Disposal.

2. Enclosure (1) discusses the responsibilities and fund sources for cleanup of past hazardous waste disposal sites and hazardous material spills. Paragraph 4.c. of enclosure (1) states DOD policy that the Defense Logistics Agency (DLA) is responsible for disposal of properly identified and containerized hazardous material spill residues.

3. Enclosure (2) discusses DPDS procedures which allow either the turn-in of containerized hazardous spill residues, or reimbursement by DPDS for residue disposal as part of a cleanup contract if this procedure is more cost effective.

4. Activities should review enclosures (1) and (2) to become familiar with funding sources and proper turn-in procedures for hazardous materials and wastes.

5. Point of contact at this Command is Mr. Steve Olson, telephone (804) 444-9565, AUTOVON 690-9565 or FTS 954-9565.

J. R. Bailey
J. R. BAILEY
By direction

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12.03-12/23/82

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350

IN REPLY REFER TO
Ser 451/399355
17 December 1981

From: Chief of Naval Operations
To: Distribution

Subj: Responsibilities and Fund Sources for Clean-up of Hazardous Waste (HW) Disposal Sites and Hazardous Material (HM) Spills

Encl: (1) HW Disposal Sites - Clean-up Scenarios and Funding Aspects
(2) Clean-up of HW Sites and HM Spills Responsibilities and Funding

Ref: (a) Resource Conservation and Recovery Act, 42 USC 6901
(b) Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("Superfund")

1. In the past, some Navy activities may have occasionally disposed of hazardous wastes (HW) by burial on Navy land, or contracted to have it disposed of off station. These were generally lawful practices at that time. Only recently have the potentially serious environmental effects of such practices been recognized. Similarly, the accidental spilling of hazardous materials (HM) can have serious environmental consequences.

2. Recently enacted laws have established very stringent requirements concerning current disposal practices (reference (a)) and clean-up responsibilities for HW disposal sites and HM spills (reference (b)). It is Navy policy to react responsibly and rapidly in HW/HM clean-up situations as public concern is very high and environmental damage is always a consideration. The purpose of this letter is to define clean-up responsibilities and the sources of funds for such actions.

3. HW Disposal Site Clean-up. There are two basic situations:

a. A Navy installation has, in the past, contracted for hazardous waste disposal at an off-station private or commercial disposal site. In the event of subsequent contamination, or imminent contamination, the operator and/or owner of the site is responsible for any clean-up actions. However, if the operator and/or owner cannot be identified, or is financially incapable of clean-up, the activity that contracted for the disposal may be liable for clean-up. This, of course, can be a legally complicated situation which, among other things, will involve a case-specific determination of Navy liability and identification of that portion of the wastes at the site that were generated by the Navy.

b. A Navy installation or a tenant on the installation has disposed of HW on land that is now owned by the Navy, and such

HW disposal is found to cause environmental contamination, or be an imminent danger to the environment.

4. Responsibilities for clean-up of HW disposal sites are as follows:

a. The activity that contracted for off-station disposal (paragraph 3a) has the basic responsibility for accomplishing clean-up if the owner or operator of the disposal site cannot be identified, or is financially incapable of clean-up. In the paragraph 3b on-station disposal situation, the installation that owns the disposal site area is responsible for any required clean-up. In all instances, technical assistance in arranging for the clean-up is available from Engineering Field Divisions (EFD) of the Naval Facilities Engineering Command (NAVFACENGCOM).

b. In cases involving the clean-up of past HW disposal sites, either on or off-station, funding shall be from centrally managed Pollution Abatement Resources administered by COMNAVFACENGCOM. Enclosure (1) provides the proper appropriation and limitations applicable to typical HW clean-up scenarios, and enclosure (2) tabulates clean-up and funding responsibilities.

5. HM Spills. The clean-up of HM spills typically involves the functions of removal of contamination, containerization and disposal of contaminated residue, and site restoration. Responsibilities are as follows:

a. Responsibility for all clean-up functions for "old" spills, (those that occurred before 1 January 1981) rests with the installation on whose property the contamination exists. Funding for clean-up of "old" spills, shall be from centrally managed pollution abatement funds administered by COMNAVFACENGCOM.

b. Responsibility for all clean-up functions for spills which occurred in the 1 January 1981 to 1 October 1982 time frame rests with the installation on whose property the contamination exists. Funding for the clean-up shall be by the spilling activity, whether Navy or non-Navy.

c. The Defense Logistics Agency (DLA) has been assigned to program for disposal of residues from HM spills that occur in FY83 and later. Thus, beginning 1 October 1982, responsibility for removal and containerization of contaminated residue and site restoration continues to rest with the installation on whose property the contamination exists; however, DLA has responsibility for final and proper disposal (including funding) of properly identified and containerized residue. Funding for the removal and containerization of contaminated residue and site restoration shall be by the spiller, whether Navy or Non-Navy.

d. Installation Commanders/Commanding Officers may delegate clean-up functions, as appropriate, e.g., delegation to the spiller who may be particularly expert in handling the spilled material.

6. Enclosure (2) provides a tabular description of HM spill clean-up and funding responsibilities.

7. It is imperative that funding requirements for those cases that are to be funded from the centrally managed pollution abatement program, as set forth in paragraphs 3, 4, and 5, be made known to COMNAVFACENGCOM as soon as the requirement for clean-up is known. Such requirements shall be forwarded to the appropriate NAVFACENGCOM EFD by message and copies provided to COMNAVFACENGCOM, the Chief of Naval Material, and the Chief of Naval Operations.

W. J. COWHILL
Deputy Chief of Naval
Operations (Logistics)

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HW DISPOSAL SITES - CLEANUP SCENARIOS AND FUNDING ASPECTS

SCENARIO	APPROPRIATION	DOLLAR LIMITATION	RATIONALE
A. Navy hires contractor to:			
1. Evaluate HW contamination, determine appropriate solution, design equipment, etc., for solution, and/or	O&M	None	Does not involve acquisition of new facilities
2. Enter Navy owned site at which HW is buried, dig it up, categorize it, containerize it, have it hauled away to an approved disposal site and dispose of it therein, and/or	O&M	None	Does not involve acquisition of new facilities
3. Bring in potable water treatment equipment and pumps, operate the equipment for several years to pump water from the soil, treat it to remove contaminants, and return it to the soil, and/or	O&M	None	Does not involve acquisition of new facilities
4. Dig a trench and place a clay barrier in the trench to intercept contaminant-laden ground water, and/or	O&M	None	The clay barrier and the clay cap are not "real property improvements"
5. Place a clay or asphalt cap over the HW site, and/or	O&M	None	
6. Drill monitoring (test) wells to take groundwater samples and prove groundwater is/is not polluted, and/or	O&M	None	The test wells are not for water production and do not add to the capability of any facet of the activity. The fence also does not add to the capability of the activity.
7. Build a fence around the contaminated site.	O&M	None	

SCENARIO	APPROPRIATION	DOLLAR LIMITATION	RATIONALE
B. Navy:			
1. Builds utilities and roads to contractor facilities described above and/or 2. Builds a water treatment facility to pump water from the soil, treat it to remove contaminants, and return the water to the soil and or	O&M or MILCON	O&M-$100K MILCON-None	Minor construction (O&M)
3. Pays to a state HW control agency funds to cover the Navy share of a state clean up of an off-station site used by many other dumpers. The state clean up involves all features described in A1-A6.	O&M	None	Does not involve acquisition of new facilities

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12.03.-12/23/82

CLEAN UP OF HW SITES AND HM SPILLS

RESPONSIBILITIES AND FUNDING

SITUATION	CLEAN UP RESPONSIBILITY	FUNDING RESPONSIBILITY
Past Contracted off-installation Disposal (para 3.a.)	Activity which contracted for the disposal	NAVFACENGCOM Pollution Abatement
Past on-installation Disposal (para 3.b.)	Installation	NAVFACENGCOM Pollution Abatement
HM Spill on Navy installation prior to 1 Jan 81	Installation	NAVFACENGCOM Pollution Abatement, if spill by Navy. If spill by others, funding by others.
HM Spill on Navy installation after 1 Jan 81	*Installation	*Spilling activity, whether Navy, or non-Navy

*See paragraph 5.c. Beginning 1 October 1982, DLA is responsible for final and proper disposal of residue.

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12.03 - 12/23/82

PROCEDURES FOR DISPOSAL OF HAZARDOUS MATERIAL SPILL RESIDUES THROUGH DLA

1. As of 1 October 1982, DLA/DPDS will assume disposal responsibility of spill residues (as defined by 40 CFR 261.3 or 40 CFR 761 for PCBs), for spills that occur in FY 1983 and later.

2. The following procedures are effective as of 1 October 1982.

3. DPDS will dispose of spill residues through the turn-in procedures outlined in paragraph 4 below or, if cost effective, through a funding process outlined in paragraph 6 below.

4. Turn-in activities will properly identify (e.g., soil contaminated with methyl ethyl ketone), package, label and meet all turn-in requirements of the consolidated hazardous material/hazardous waste disposal guidance when turning in spill residues to the DPDO. Due to the uniqueness of the item being turned in, prior coordination by the turn-in activity with the DPDO is essential to ensure disposal meets all requirements yet is completed in the most cost effective manner to DOD. The standard local stock number (LSN) "9999-00-SPILRES" has been developed by DPDS to be used by generators for the turn-in of all spill residues including PCBs. The turn-in activity will place the standard local stock number (LSN), "9999-00-SPILRES", on the disposal turn-in document (DTID) and Code "HW" for hazardous waste in Block C of the DTID. If the turn-in activity possesses additional information (e.g., chemical analysis of spill residue), it should be attached to the DTID upon turn-in to the DPDO. Acceptance of physical custody of spill residues by DPDOs will be in accordance with established criteria.

5. If, after the initial spill has been contained and the turn-in activity can provide a more cost effective spill residue disposal service as part of spill cleanup, the activity may obtain the necessary funding for such disposal from DPDS through prior coordination, as indicated in paragraph 6 below, with the following office:

Defense Property Disposal Service
Federal Center
ATTN: DPDS-HP
Battle Creek, MI 49016
AV 369-6977
Commercial (616) 962-6511 Ext. 6977
FTS 372-6977

6. This coordination will be in writing and consist of the following:

a. Request for fund citation along with specific address, including office symbol to which fund citation should be sent by electronic means. Line item on service contract for spill residue disposal must designate that DPDS-CF is the paying office.

Enclosure (2)

b. Identification of the property to be disposed of (e.g., soil contaminated with methyl ethyl ketone).

c. Indication of quantity of material spilled and quantity of material to be disposed of.

d. Indication of how material will be handled or treated for disposal (e.g., will it be in solid or liquid form).

e. Statement of work for service contract and proposed method of disposal.

f. Estimated cost for disposal of spill residue and cost analysis.

g. Circumstances of spill, including when spill occurred and location of spill.

h. Contact person within turn-in activity who can, if necessary, answer further questions.

7. To preclude the hardship of additional paperwork on turn-in activities, the information requested above in paragraphs 6b through 6h may be provided in the form of a copy of the DTID and the proposed service contract, but all items must be addressed.

8. Upon DPDS approval of the service contract for disposal, the turn-in activity will be provided a fund citation and instructions indicating which DPDO will take accountability of the property. The DTID will then be prepared by the turn-in activity in accordance with procedures outlined above.

9. After completion of the disposal, the turn-in activity will forward a copy of the resulting service contract to above DPDS address.

10. This policy will be disseminated to our region offices and to our Defense Property Disposal Offices.

11. This policy will be submitted through channels for incorporation in the DOD 4160.21-M, Defense Disposal Manual.

Doc. No.: CLEJ-00561-12.03-01/26/87

North Carolina Department of Human Resources
Eastern Regional Office • 404 Saint Andrews Drive • Greenville, N. C. 27834

James G. Martin, Governor

Phillip J. Kirk, Jr., Secretary

January 26, 1987

Commanding General
USMC Base
Camp Lejeune, NC 28542

RE: USMC Base Water System
Onslow County

Dear Sir:

We have experienced an excellent relationship with the Base water supply personnel both from an administrative and technical respect. In an effort to maintain and improve this, your attention is directed to the North Carolina "Rules Governing Public Water Supplies" (NCAC 10, 10, 10D .0900), which require the owner of any public water system intending to alter, construct, or expand the system to provide written notice, including plans and specifications, to our office in Raleigh. Please note this is required prior to contracts being awarded and/or construction begun.

While not intending to interfere with routine operations and maintenance, we are concerned with any significant developments at the water treatment facilities within the State.

Thanks for your continued cooperation and interest.

Sincerely,

J. Fred Hill
Water Plant Consultant
Public Water Supply Branch
Environmental Health Section

bgb

Enclosure

cc: W. E. Venrick
M. P. Bell

DOC NO: CLEJ-00561-12.03-1/26/87

T6280

6280
FAC
FEB 19 1987

From: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina
To: Commander, Atlantic Division, Naval Facilities Engineering Command, Norfolk, Virginia 23511-6287 (Code 40)

Subj: NORTH CAROLINA RULES GOVERNING PUBLIC WATER SUPPLIES

Encl: (1) NC Dept of Human Resources ltr dtd 26 Jan 87 w/encl

1. The enclosure provides subject rules and required notification prior to alteration, construction, expansion, etc. Request you review and provide comments if unable to comply. Point of contact at this office is Mr. R. E. Alexander, Autovon 484-3034/3035.

T. J. DALZELL
By direction

Blind copy to:
PWO
EnvEngr

A 2/18

Writer: Mr. Alexander, EnvEngr, FAC, X3034
Typist: M. Ballentine, 18 Feb 87

Doc No: CLEJ-00661-
12.03-01/26/87

July 1, 1986

To the Users of the "Rules Governing Public Water Supplies":

Please be advised that any reference to "Water Supply Branch" or "Engineering Planning Branch" within these rules should be read as "Public Water Supply Branch" for both.

Changes in the text of these rules will be formally changed as soon all steps for approval have been completed. During the interim time, respectfully request your understanding and patience.

Doc No: CLEJ-00561-
12.03-01/26/87

RULES

GOVERNING PUBLIC WATER SUPPLIES

SECTION .0600 THROUGH .2600

OF THE

NORTH CAROLINA ADMINISTRATIVE CODE

TITLE 10

DEPARTMENT OF HUMAN RESOURCES

CHAPTER 10

HEALTH SERVICES: ENVIRONMENTAL HEALTH

SUBCHAPTER 10D

WATER SUPPLIES

NORTH CAROLINA
DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
ENVIRONMENTAL HEALTH SECTION
EFFECTIVE
JANUARY 1, 1977
AMENDED SEPTEMBER 1, 1979
AMENDED EFFECTIVE SEPTEMBER 30, 1980
AMENDED EFFECTIVE MARCH 31, 1981
AMENDED EFFECTIVE FEBRUARY 27, 1982
AMENDED EFFECTIVE APRIL 1, 1982
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AMENDED EFFECTIVE OCTOBER 1, 1984
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AMENDED EFFECTIVE JANUARY 1, 1986

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SECTION .0600 - FLUORIDATION OF PUBLIC WATER SUPPLIES

.0601 POLICY

Upon receipt of an application from a community water system to fluoridate its water supply, the Department of Human Resources will approve the application provided the rules for fluoridation pursuant to this Section are followed.

History Note: Statutory Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979.

.0602 FORMAL APPLICATION

(a) Fluoride shall not be added to a community water system until a formal application has been submitted to and written approval is granted by the Secretary of the Department of Human Resources.

(b) Such approval will be considered upon written application and after adequate investigation has been made to determine if the policy adopted by the division of health services has been satisfied and the facilities, their accuracy and the proposed method of control are satisfactory and meet the requirements hereafter stated.

History Note: Statutory Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979.

.0603 RESOLUTION

The application requesting authorization to add fluoride to the water supply shall be accomplished by a certified copy of a resolution legally adopted by the municipal board, or governing body, stating that the approval of the appropriate local board of health has been received and setting forth full information regarding the proposed procedure to be followed in applying the fluoride, the type of equipment to be used and the control measures to be employed in its application.

History Note: Statutory Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977.

.0604 FEEDING EQUIPMENT

Accurate feeding equipment must be provided for applying fluoride. Either gravimetric or volumetric dry-feed equipment or positive displacement liquid-feed equipment with accuracy within five percent is required.

History Note: Statutory Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977.

.0605 PROTECTION OF OPERATORS

(a) Special precautions must be taken to protect the operators from inhaling fluoride dust when handling this chemical and while charging the hoppers of the feeders.

(b) Dry feeders shall be equipped with dust collectors consisting of bag filters operating under positive air pressure and vented to the outside air.

(c) Each operator who handles fluoride shall be provided with his individual toxic dust respirator to be used only when handling the chemical.

(d) When liquid or solution feed equipment is used, special precautions against siphonage and improper chemical mixing must be provided after consultation with and approval by the Department of Human Resources.

History Note: Statutory Authority G.S. 130-166.44;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977.

.0606 CONTROL OF TREATMENT PROCESS

(a) The treatment process shall result in the adjustment of fluoride ion (F) in the treated water to 1.0 mg/liter.

(b) A water treatment plant operator, having qualifications acceptable to the controlling health agencies, shall conduct the necessary chemical analyses and supervise application of the fluoride.

(c) An adequate number of samples shall be collected and analyzed from points before and after fluoridation and from one or more points in the distribution system. The minimum number of control tests and the number of check samples to be collected and submitted to the laboratory section of the division of health services, will be determined by the controlling health agencies in each instance.

(d) The fluoride content of the water shall be determined in accordance with either the procedure given in the latest edition of "Standard Methods for the Examination of Water and Wastewater" (See .0609 of this Section) or other procedures approved by the secretary.

(e) Accurate records of the amount of fluoride applied to the water and the results of all fluoride analyses shall be recorded on forms approved by the Department of Human Resources and submitted to the Department of Human Resources on or before the 15th day of the following month.

(f) The quality of the fluoride chemical applied to the water shall be approved by the Department of Human Resources. The manufacturer shall submit a certified copy of the chemical analysis of the product offered for sale. Test for the purity of the chemical shall include the U.S. Pharamacopoeia tests for heavy metals (U.S. Pharmacopoeia, Eighteenth Revision).

(g) The fluoride chemical shall be plainly labeled and, if in dry form, should be colored by means of a dye in order that it may be readily distinguished from other chemicals used in water treatment processes. The dye used for this purpose, when mixed with

the fluoride compound and applied to the water so as to add 1.0 mg/liter of fluoride (F), shall not in any way be toxic or detrimental to health and shall not in any way affect the quality of the water in respect to the requirements of 10 NCAC 10D .1616. The kind of coloring material used for coloring the fluoride shall be identified by the manufacturer in his proposal. Where tinted or colored fluoride chemicals are not available, white fluoride may be used, provided every necessary precaution is taken to insure its proper handling and use.

History Note: Statutory Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. December 17, 1979.

.0607 APPROVAL MAY BE RESCINDED

Failure to thoroughly and effectively carry out the requirements governing the application of fluoride, or for other justifiable reasons, shall be considered sufficient cause to rescind the approval of the Department of Human Resources and to withdraw the authorization granted for the permission to add fluoride to a community water system.

History Note: Statutory Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979.

.0608 SEVERABILITY

If any provision of this Section, or the application thereof to any person or circumstance, is held invalid, the remainder of these rules, or the application of such provision to other persons or circumstances, shall not be affected thereby.

History Note: Statutory Authority G.S. 130A-316;
Eff. February 1, 1976;
Readopted Eff. December 5, 1977.

.0609 REFERENCE RULES

The following codes and standards mentioned in this Section are adopted by reference and can be inspected at the principal address of the division of health services:

(1) "Pharmacopoeia of the United States," 18th revision, may be purchased from Mack Publishing Company, Easton, Pennsylvania, 18042. The cost is seventeen dollars and fifty cents ($17.50);

(2) "Standard Methods for the Examination of Water and Wastewater," 14th edition may be purchased from the American Public Health Association, Inc., 1790 Broadway, New York, New York 10010; The cost of the 14th edition is thirty-five dollars ($35.00).

History Note: Statutory Authority G.S. 130A-316;
Eff. February 1, 1976;

Amended Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. December 17, 1979.

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SECTION .0700 - PROTECTION OF PUBLIC WATER SUPPLIES

.0701 PURPOSE AND SCOPE

(a) For the protection of the public health, and pursuant to authority granted by Article 10 of Chapter 130A of the General Statutes of North Carolina, the commission for health services hereby adopts the following rules (10 NCAC 10D .0700 through .2500) governing the location of sources of supply for public water systems, the design and construction of public water system facilities, the operation of public water systems, and the protection of public water systems.

(b) The provisions of this Subchapter shall apply to each public water system in the state, unless the public water system meets all of the following conditions:

(1) consists only of distribution and storage facilities and does not have any collection and treatment facilities;

(2) obtains all of its water from, but is not owned or operated by, a public water system to which such regulations apply;

(3) does not sell water to any person; and

(4) is not a carrier which conveys passengers in interstate commerce.

(c) Any provision of any charter granted to a public water system in conflict with the rules of this Subchapter is hereby repealed.

History Note: Authority G.S. 130A-315;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. October 1, 1984; September 1, 1979; January 1, 1978.

.0702 DEFINITIONS

As used in this Subchapter, the term:

(1) "Act" means the North Carolina Drinking Water Act.

(2) "Administrator" means the Administrator of the United States Environmental Protection Agency or an authorized representative.

(3) "Certified Laboratory" shall mean any facility for performing bacteriological, chemical or other analyses on water which has received interim or final certification by either the Environmental Protection Agency or the division of health services laboratory section certification program.

(4) "Class I reservoir" shall mean a reservoir from which water flows by gravity or is pumped directly to a treatment plant or to a small intervening storage basin and thence to a treatment plant.

(5) "Class II reservoir" shall mean a reservoir from which the water flows by gravity or is pumped to a Class I reservoir prior to final entrance to a water treatment plant.

(6) "Class III reservoir" is a large impoundment used for electric power generation, flood control, and similar purposes,

and which also serves as a source of raw water for a community water system.

(7) "Commission" means commission for health services as created by G.S. 143B-142.

(8) "Contaminant" means any physical, chemical, biological or radiological substance or matter in water.

(9) "Cross-connection" shall mean:

(a) any physical connection between a potable water supply system and any other piping system, sewer fixture, container, or device, whereby water or other liquids, mixtures, or substances may flow into or enter the potable water supply system;

(b) any potable water supply outlet which is submerged or is designed or intended to be submerged in non-potable water or in any source of contamination or;

(c) an air gap, providing a space between the potable water pipe outlet and the flood level rim of a receiving vessel of less than twice the diameter of the potable water pipe.

(10) "Community Water System intake" shall mean the structure at the head of a conduit into which water is diverted from a stream or reservoir for transmission to water treatment facilities.

(11) "Department" means the Department of Human Resources as created by G.S. 143B-136.

(12) "Disinfectant" means any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone added to water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogenic microorganisms.

(13) "Dose equivalent" means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body as specified by the International Commission on Radiological Units and Measurements (ICRU).

(14) "Federal act" means the Safe Drinking Water Act of 1974, as amended, cited as P.L. 93-523.

(15) "Federal agency" means any department, agency or instrumentality of the United States.

(16) "Gross alpha particle activity" means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

(17) "Gross beta particle activity" means the total radioactivity due to beta particle emission as inferred from measurements on a dry sample.

(18) "Halogen" means one of the chemical elements chlorine, bromine or iodine.

(19) "Man-made beta particle and photon emitters" means all radionuclides emitting beta particle and/or photons listed in "Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for

Occupational Exposure," NBS HANDBOOK 69, except the daughter products of thorium 232, uranium 235 and uranium 238.

(20) "Maximum contaminant level" means the maximum permissible level of a contaminant in water which is delivered to the free flowing outlet of the ultimate user of a public water system, except in the case of turbidity where the maximum permissible level is measured at the point of entry to the distribution system. Contaminants added to the water under circumstances controlled by the user, except those resulting from corrosion of piping and plumbing caused by water quality, are excluded from this definition.

(21) "Maximum Total Trihalomethane Potential (MTP)" means the maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual after 7 days at a temperature of 25 C or above.

(22) "National Primary Drinking Water Regulations" means primary drinking water regulations promulgated by the administrator pursuant to the federal act.

(23) "Non-potable water supply" shall mean waters not approved for drinking or other household uses.

(24) "Person" means an individual, corporation, company, association, partnership, unit of local government, state agency, federal agency, or other legal entity.

(25) "Picocurie (pCi)" means that quantity of radioactive material producing 2.22 nuclear transformations per minute.

(26) "Potable water supply" shall mean water which is approved for drinking or other household uses.

(27) "Public water system"

(a) "Public Water System" means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Such term includes:

(i) any collection, treatment, storage, and distribution facility under control of the operator of such system and used primarily in connection with such system; and

(ii) any collection or pre-treatment storage facility not under such control which is used primarily in connection with such system.

(b) A public water system is either a "community water system" or a "non-community water system":

(i) "Community Water System" means a public water system which serves at least 15 service connections or regularly serves at least 25 year-round residents.

(ii) "Non-Community Water System" means a public water system which is not a community water system.

(28) "Raw water" shall mean surface water or ground water which because of bacteriological quality, chemical quality, turbidity, color, or mineral content makes it unsatisfactory

as a source for a community water system without treatment.

(29) "Raw water reservoir" shall mean a natural or artificial impoundment used for the primary purpose of storing raw water to be subsequently treated for use as a source for a community water system.

(30) "Rem" means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A "millirem (mrem)" is 1/1000 of a rem.

(31) "Sanitary survey" means an on-site review of the water source, facilities, equipment, operation and maintenance of a public water system for the purpose of evaluating the adequacy of such source, facilities, equipment, operation and maintenance for producing and distributing safe drinking water.

(32) "Secretary" means the executive officer of the Department of Human Resources or an authorized agent.

(33) "Standard sample" means the aliquot of finished drinking water that is examined for the presence of coliform bacteria.

(34) "Supplier of water" means any person who owns, operates, or controls a public water system.

(35) "Total trihalomethanes" (TTHM) means the sum of the concentration in milligrams per liter of the trihalomethane compounds (trichloromethane [chloroform], dibromochloromethane, bromodichloromethane and tribromomethane [bromoform]), rounded to two significant figures.

(36) "Treatment technique requirement" means a requirement of the North Carolina Drinking Water Regulations which specifies for a contaminant a specific treatment technique which leads to a reduction of the level of such contaminant sufficient to comply with the requirements of this Section.

(37) "Trihalomethane" (THM) means one of the family of organic compounds, named as derivatives of methane, wherein three of the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.

(38) "Unit of local government" means a county, city, consolidated city-county, sanitary district, or other local political subdivision, authority, or agency of local government.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. April 1, 1983; September 30, 1980;
March 31, 1980; September 1, 1979.

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SECTION .0800 - LOCATION OF SOURCES OF PUBLIC WATER SUPPLIES

.0801 SURFACE SUPPLIES FOR COMMUNITY WATER SYSTEMS

(a) A surface supply may be used for a community water system with disinfection if it complies with the provisions of this Section.

(b) Such water supply shall be derived from uninhabited wooded areas.

(c) The entire watershed shall be either owned or controlled by the person supplying the water or be under the control of the federal or state government; however, no such new water supply shall be created except where the water system owner shall own in its entirety the watershed from which the water will be obtained.

(d) The water after disinfection shall be of potable quality as determined by bacteriological and chemical tests performed by a certified laboratory. The presence of contaminants shall not exceed the limits set forth in Section .1600 of this Subchapter.

(e) The water source shall have an A-I classification as established by the Environmental Management Commission and shall meet the quality standards for that classification.

History Note: Statutory Authority G.S. 130A-315; 130A-318; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. September 1, 1979.

.0802 REMOVAL OF DISSOLVED MATTER AND SUSPENDED MATTER

Any surface water which is to receive treatment for removal of dissolved matter and/or suspended matter in order to be used for a community water system shall be obtained from a source which meets the A-I or A-II stream classification standards established by the Environmental Management Commission and shall be properly protected from objectionable sources of pollution as determined by a sanitary survey of the watershed made by an authorized representative of the department. The source supply shall be sufficient in capacity to satisfy the anticipated needs of the users for the period of design.

History Note: Statutory Authority G.S. 130A-315; 130A-318; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. September 1, 1979.

.0803 PUBLIC WELL WATER SUPPLIES

Any site or sites for any water supply well to be used as a community water system shall be investigated by an authorized representative of the division of health services. Approval by the division of health services is required in addition to any approval or permit issued by any other state agency. The site shall meet the following requirements for approval:

(1) The well shall be located on a lot so that the area within 100 feet of the well shall be owned or controlled by the person supplying the water. Variances in the well lot area may be permitted where emergency conditions exist as determined by a representative of the division of health services.
(2) The well shall be located at least 100 feet from any sewer or other potential sources of pollution unless the sewer is constructed of materials and joints that are equivalent to water main standards, in which case the sewer shall be at least 50 feet from the well.
(3) The site shall be graded or sloped so that surface water is diverted away from the well. The site shall not be subject to flooding.

History Note: Statutory Authority G.S. 130A-315; 130A-318; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979.

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SECTION .0900 - SUBMISSION OF PLANS, SPECIFICATIONS, AND REPORTS

.0901 APPLICABILITY; PRIOR NOTICE

(a) All persons including units of local government intending to construct, alter, or expand a community water system shall give written notice thereof, including submission of applicable plans, specifications and engineering reports, to the environmental health section, division of health services as required by the rules of this Section.

(b) All reports, plans and specifications shall be submitted to the division of health services at least 30 days prior to the date upon which action by the division is desired.

(c) If revisions to the plans or specifications are necessary, the engineer who prepared them will be notified. Revised plans and specifications will constitute a resubmittal and additional time will be required for review.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. June 30, 1980; September 1, 1979.

.0902 PLANS

(a) Procedure Applicable to all Projects, Extensions, or Changes. All plans, specifications or other data intended for submission to the environmental health section, division of health services, in compliance with the statutes covering community water systems, shall be submitted in triplicate for review by the Environmental Health Section, Division of Health Services, P.O. Box 2091, Raleigh, North Carolina, 27602.

(b) Plans for Community Water Systems. Plans should consist of legible prints having black, blue, or brown lines on a white background suitable for microfilming. The plans should not be more than 36 inches wide and 48 inches long.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. June 30, 1980; September 1, 1979.

.0903 ENGINEER TO PREPARE PLANS AND SPECIFICATIONS

Detailed plans and specifications for community water system facilities shall be prepared by a professional engineer licensed to practice in the State of North Carolina. The plans shall bear an imprint of the registration seal of the engineer.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. September 1, 1979.

.0904 APPLICATION FOR APPROVAL; BY WHOM MADE

Applications for approval shall be filed by the proper unit of local government or person for whom the work is to be done, on blanks which will be supplied by the division of health services. One copy of the plans and specifications, upon approval, will be certified and returned to the person or persons making application for approval.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.0905 APPROVAL OF PLANS NECESSARY BEFORE CONTRACTING

(a) No construction of community water systems shall be undertaken, and no contract for construction, alteration, or installation of community water systems shall be entered into prior to approval of plans and specifications by the department.

(b) Units of local government which have an adopted water system extension policy, upon submission to and approval of a copy of their policy by the Department of Human Resources, may be excluded from the requirements of submitting plans and specifications for water main extensions that are minor in comparison to the total system, and would not have adverse effect upon the existing system supply or pressure, provided the following requirements are met:

(1) Plans and specifications for all such extensions shall be prepared by or under the direct supervision of an engineer licensed to practice in the State of North Carolina.

(2) All plans shall be approved by the units of local government engineering department or its consulting engineers prior to the commencement of construction.

(3) The Department of Human Resources shall have approved the extension policy submitted by the unit of local government prior to construction commencing.

(4) The extension policy submitted for review and approval by the Department of Human Resources shall provide for establishing ownership, operation and maintenance of water system extensions, and shall constitute prior notice of proposed construction.

(5) Where design is to be based on a local government's standard specifications in lieu of written separate specifications for each extension project, the standard specifications shall have been previously approved by the Department of Human Resources.

(6) The local government shall have obtained from the Department of Human Resources a letter stating they have met the aforementioned requirement and are excluded from the requirement for submitting detailed plans and specifications for each minor extension in keeping with the intent of this Rule.

(7) Where such minor additions or extensions have been made an annual up-to-date plan of the entire system shall be

submitted for review and approval by the division of health services.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. September 1, 1979.

.0906 CHANGES IN PLANS OR SPECIFICATIONS AFTER APPROVAL

No deviation from the approved plans or specifications shall be made unless amended plans showing such proposed changes shall have been submitted to and approved by the Department of Human Resources. Failure to comply with this requirement shall invalidate any previous approval of plans and specifications.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.0907 ENGINEER'S REPORT

(a) The owner, when required, shall submit to the environmental health section, division of health services, an engineering report in duplicate covering the basic factors and principles considered in planning of the project.

(b) Such engineering reports shall be required for projects involving new community water systems, modification of existing community water system, development or modification of surface water sources and other community water system projects requiring significant engineering.

(c) Before preparation of the engineering report, the consulting engineer may wish to consult with the office or field staff of the division of health services concerning the proposed source of supply, treatment methods, and alternatives.

History Note: Statutory authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. June 30, 1980; September 1, 1979.

.0908 TYPE AND FORM OF EXHIBITS

(a) Engineer's Report. The engineer's report (including any preliminary plans) shall contain the following information where applicable:

(1) description of any existing water system related to the project;
(2) identification of the municipality, community, or area to be served by the proposed water system;
(3) the name and address of the owner;
(4) a description of the nature of the establishments and of the area to be served by the proposed water system;

(5) provisions for future extension or expansion of the water system.
(6) a projection of future water demand or requirements for service;
(7) any alternate plans for meeting the water supply requirements of the area;
(8) financial considerations of the project including:
(A) any alternate plans;
(B) costs of integral units;
(C) total costs;
(D) operating expenses; and
(E) methods of financing costs of construction, operation and maintenance;
(9) population records and trends, present and anticipated future water demands, present and future yield of source or sources of water supply;
(10) character of source or sources of water supply, including:
(A) hydrological data;
(B) stream flow rates;
(C) chemical, mineral, bacteriological, and physical qualities; and
(D) location and nature of sources of pollution; and
(11) proposed water treatment processes including:
(A) criteria and basis of design of units,
(B) methods or procedures used in arriving at recommendations, and
(C) reasons or justifications for any deviations from conventional or indicated process or method.

(b) Plans. Plans for water supply systems shall consist of the following:
(1) title information including the following:
(A) name of the city, town, board, commission or other owner for whom the plans were prepared;
(B) the locality of the project;
(C) the general title of the set of drawings and prints;
(D) the specific title of each sheet;
(E) the date; and
(F) the scales used.
(2) a preliminary plat plan or map showing the location of proposed sources of water supply;
(3) a general map of the entire water system showing layout and all pertinent topographic features;
(4) detail map of source or sources of water supply;
(5) layout and detail plans for intakes, dams, reservoirs, elevated storage tanks, standpipes, pumping stations, treatment plants, transmission pipelines, distribution mains, valves, and appurtenances and their relation to any existing water system, and the location of all known existing structures or installations and natural barriers that might interfere with the proposed construction; and

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(6) the north point.

(c) Specifications. Complete detailed specifications for materials, equipment, workmanship, test procedures and specified test results shall accompany the plans. The specifications shall include, where applicable:

(1) the design and number of chemical feeders, mixing devices, flocculators, pumps, motors, pipes, valves, filter media, filter controls, laboratory facilities and equipment, and water quality control equipment and devices;

(2) provision for continuing with minimum interruption the operation of existing water supply facilities during construction of additional facilities;

(3) safety devices and equipment; and

(4) procedure for disinfection of tanks, basins, filters, wells and pipes.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

SECTION .1000 - WATER SUPPLY DESIGN CRITERIA

.1001 MINIMUM REQUIREMENTS

The design criteria given in this Section are the minimum requirements for approval of plans and specifications of community water systems by the division of health services, Department of Human Resources. The department provides additional guidelines for design of water systems in 10 NCAC 10D .1700 through .2200.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979.

.1002 WATER SUPPLY WELLS

(a) Well Construction. The construction of water supply wells shall conform to well construction regulations and standards of the division of environmental management, N.C. Department of Natural Resources and Community Development.

(b) Upper Terminal of Well. The well casing shall neither terminate below ground nor in a pit. The pump pedestal for above ground pumps of every water supply well shall project not less than six inches above the concrete floor of the well house, or the concrete slab surrounding the well. The well casing shall project at least one inch above the pump pedestal. For submersible pumps the casing shall project at least six inches above the concrete floor or slab surrounding the well head.

(c) Sanitary Seal. The upper terminal of the well casing shall be sealed watertight with the exception of a vent pipe or vent tube having a downward-directed, screened opening.

(d) Concrete Slab or Well House Floor. Every water supply well shall have a continuous bond concrete slab or well house concrete floor extending at least three feet horizontally around the outside of the well casing. Minimum thickness for the concrete slab or floor shall be four inches.

(e) Sample Tap and Waste Discharge Pipe. A water sample tap and piping arrangement for discharge of water to waste shall be provided.

(f) Yield.

(1) Wells shall be tested for yield and drawdown. A report or log of a least a 24-hour drawdown test to determine yield shall be submitted to the division of health services for each well.

(2) Wells shall be located so that the drawdown of any well will not interfere with the required yield of another well.

(3) The combined yield of all wells of a water system shall provide in 12 hours pumping time the average daily demand as determined in subparagraph (f) (7).

(4) The capacity of the permanent pump to be installed in each well shall not exceed the yield of the well as determined by the drawdown test.

(5) A community water system using well water as its source of supply and designed to serve 50 or more residences or connections shall provide at least two wells. In lieu of a second well, another approved water supply source may be accepted.

(6) A totalizing meter shall be installed in the piping system from each well.

(7) The well or wells serving a mobile home park shall be capable of supplying an average daily demand of 250 gallons per day per connection. The well or wells serving residences shall be capable of supplying an average daily demand of 400 gallons per day per connection.

(g) Initial Disinfection of Water Supply Well. All new wells, and wells that have been repaired or reconditioned shall be cleaned of foreign substances such as soil, grease, and oil, and then shall be disinfected. A representative sample or samples of the water (free of chlorine) shall be collected and submitted to an approved laboratory for bacteriological analyses. After disinfection the water supply shall not be placed into service until bacteriological test results of representative water samples analyzed in an approved laboratory are found to be satisfactory.

(h) Initial Chemical Analyses. A representative sample of water from every new water supply well shall be collected and submitted for chemical analyses to the laboratory section, division of health services or to a laboratory approved by the division of health services. The results of the analysis must be satisfactory before the well is placed into service.

(i) Continuous Disinfection. Equipment designed for continuous application of chlorine or hypochlorite solution or some other approved and equally efficient disinfectant shall be provided for all well water supplies introduced on or after January 1, 1972. Equipment for determining residual chlorine concentration in the water shall be specified.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. January 1, 1986; March 31, 1980; September 1, 1979.

.1003 SURFACE WATER FACILITIES

(a) Unimpounded Stream. Both the minimum daily flow of record of the stream and the estimated minimum flow calculated from rainfall and run-off shall exceed the maximum daily draft for which the water treatment plant is designed with due consideration given to requirements for future expansion of the treatment plant.

(b) Pre-settling Reservoirs. Construction of a pre-settling or pre-treatment reservoir shall be required where excessive bacterial concentrations or wide and rapid variations in turbidity and/or chemical qualities occur.

(c) Impoundments. Raw water storage capacity shall be sufficient to reasonably satisfy the designed water supply demand

during periods of drought.

(d) Clearing of Land for Impoundment. The area in and around the proposed impoundment of class I and class II reservoirs shall be cleared as follows:

(1) The area from two feet above and five feet below the normal full level of the impoundment shall be cleared and grubbed of all vegetation and shall be kept cleared until the reservoir is filled, provided that the area two feet above the normal full level may be reduced if the clearing at that elevation would exceed a horizontal distance of 50 feet from the full level. Secondary growth should be removed periodically and in all cases prior to flooding. A margin of at least 50 feet around the impoundment shall be owned or controlled by the water supplier.

(2) The entire area below the five foot water depth shall be cleared and shall be kept cleared of all growth of less than six inches in diameter until the reservoir is filled. Stumps greater than six inches in diameter may be cut off at ground level.

(3) All brush, trees, and stumps shall be burned or removed from the watershed.

(e) Intakes, Pumps, Treatment Units, and Equipment. Raw water intakes, pumps, treatment units and equipment shall be designed to provide water of potable quality meeting the water quality requirements stated in Section .1600 of this Subchapter.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

.1004 WATER TREATMENT FACILITIES

(a) Mixing and Dispersion of Chemicals. Provisions shall be made for adequate mixing and dispersion of chlorine and other chemicals applied to the water. There shall be provided a minimum of 20 minutes chlorine contact time prior to pumping the water to the distribution system.

(b) Chemical Feed Machines

(1) Durable chemical feed machines designed for adjustable accurate control of feed rates shall be installed for application of all chemicals necessary for appropriate treatment of the water. Sufficient stand-by units to assure uninterrupted operation of the treatment processes shall be provided.

(2) Chemical feed lines from the feeders to the points of application shall be of durable material, adequate in size, corrosion resistant, easily accessible for cleaning and protected against freezing. Excessive length shall be avoided and the number of bends reduced to a minimum.

(c) Disinfection Equipment.

(1) Equipment designed for application of chlorine, or some

other approved, equally efficient disinfectant shall be provided. Stand-by units shall be provided. The plans and specifications shall describe the equipment in detail.

(2) Chlorinators shall be installed in tightly constructed, above ground rooms with adequate mechanical ventilation to the outside air. The capacity of exhaust fans shall be sufficient to discharge all air in the rooms every 30 seconds to 1 minute. The fans or their suction ducts shall be located not more than eight inches above floor level. Provisions for entrance of fresh air shall be made. The point of discharge shall be so located as not to contaminate the air in any building or inhabited areas. Electrical switches for operation of fans shall be located outside the chlorinator rooms. Rooms used for storage of chlorine cylinders shall be designed as described above.

(d) Safety Breathing Apparatus. Emergency breathing equipment for operators shall be stored outside rooms where chlorine is used or stored.

(e) Meters and Gauges. Meters and gauges, including raw and finished water meters, shall be installed to indicate and record water flow entering the treatment plant and water pumped or conducted to the distribution system.

(f) Prevention of Backflow and Back-Siphonage. Submerged inlets and interconnections whereby non-potable water, or water of questionable quality, or other liquids may be siphoned or forced into or otherwise allowed to enter the finished water supply shall not be permitted.

(g) Chemical Storage. Separate space for storing at least 30 days supply of chemicals shall be provided. A separate room or partitioned space shall be provided for storage of dry fluoride chemicals or liquid fluoride chemicals in portable containers.

(h) Laboratory. Adequate space, equipment, and supplies shall be provided for daily, routine chemical and bacteriological tests. A layout of laboratory furniture and equipment shall be included in the plans.

(i) Toilet Facilities. Adequate toilet facilities shall be provided for the plant personnel.

History Note: Statutory Authority G.S. 130A-315;
130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

.1005 STORAGE OF FINISHED WATER

(a) Ground Level Storage

(1) Water Ground Storage Tank. Finished water ground storage tanks shall be provided with a light-proof and insect-proof cover of concrete, steel or other material approved by the division of health services. The construction joints between side walls and the covers of concrete tanks or reservoirs shall be above ground

level and above flood level; except that clearwells constructed below filters may be excepted from this requirement when total design, including waterproof joints, gives equal protection.

(2) Access Manholes. The access manholes for finished water storage tanks or reservoirs shall be framed at least four inches above the tank or reservoir covers at the opening and shall be fitted with solid covers of durable materials that overlap the framed openings and extend down around the frames at least two inches. The covers for the openings shall be hinged at one side and fitted with a locking device.

(3) Tanks or Reservoirs. The tanks or reservoirs shall have vents with screened, downward directed openings. The vent and screen shall be of corrosion resistant, durable material.

(4) Overflow. The overflow pipes for storage tanks or reservoirs shall not be connected directly to sewers or storm drains. Screens or other devices to prevent access by rodents, insects, etc. should be provided in the overflow pipe.

(5) Inlets and Outlets. Water supply inlets and outlets of storage tanks and reservoirs shall be located and designed to provide adequate circulation of the water. Baffles shall be constructed where necessary to provide thorough circulation of the water.

(6) Drain Valves. All tanks and reservoirs shall be equipped with drain valves.

(b) Elevated Storage Tanks

(1) Standards. The specifications for elevated tanks, stand-pipes, towers, paints, coatings and other appurtenances shall meet the appropriate AWWA Standards D 100-73 (adopted in 1973 or the latest adoption), D 101-53 (adopted in 1953 or the latest adoption), and D 102-64 (adopted in 1964 or the latest adoption) of the American Water Works Association, Inc., or approved equal standards. Copies of AWWA standards are available from the American Water Works Association, 666 W. Quincy Avenue, Denver, Colorado 80235, at a cost of one hundred forty dollars ($140.00) per complete set for nonmembers or seventy dollars ($70.00) for members. Copies are available for public inspection at the principal address of the environmental health section, division of health services.

(2) Elevation of Storage Tanks. The elevation of storage tanks shall be sufficient to produce a designed minimum distribution system pressure of 20 pounds per square inch at peak flow.

(3) Drain. Elevated storage tanks shall be equipped with drain valves.

(c) Hydropneumatic Storage Tanks (Pressure Tanks)

(1) Use of Pressure Tanks. Where well yields and pumping capacities are sufficient, hydropneumatic (pressure)

tanks may be used to control pumps, stabilize pressures and provide a minimum of storage. Pressure tanks shall not be considered acceptable for meeting total storage requirements for water systems of over 300 connections, except as provided in .1005(d) of this Section.

(2) Corrosion Control. Pressure tanks shall be galvanized after fabrication, provided with an approved liner or coated in accordance with AWWA Standard D 102-64 (adopted in 1964) of the American Water Works Association, Inc., or approved equal standard. Copies of AWWA standards are available from the American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235, at a cost of one hundred forty dollars ($140.00) per complete set for nonmembers or seventy dollars ($70.00) for members. Copies are available for public inspection at the principal address of the environmental health section, division of health services.

(3) Required Parts. Pressure tanks shall have access manholes, bottom drains, pressure gauges, and properly sized safety and vacuum relief valves.

(4) Controls. Automatic pressure, start-stop controls for operation of pumps shall be provided.

(d) High Yield Aquifers

(1) Equipment. In lieu of providing elevated storage for systems over 300 connections in areas where aquifers are known to produce high yields, i.e., 400-500 gpm from an eight-inch well, a system of extra well pumping capacity, auxiliary power generating equipment, hydropneumatic tanks, controls, alarms and monitoring systems may be provided. The design and installation of such system shall assure that reliable, continuous service is provided.

(2) Auxiliary Power. Such a system shall have an adequate number of wells equipped with sufficient pumping capacity so that the required flow rate can be maintained with the single largest capacity well and pump out of operation. Auxiliary power generating equipment shall be provided for each well sufficient to operate the pump, lights, controls, chemical feeders, alarms and other electrical equipment as may be necessary.

(3) Pump Control. Hydropneumatic tanks designed in accordance with (c) of this Rule and Section .2000 of this Subchapter shall be provided to maintain pressure and control the pump operation.

(4) Alarm System. An alarm system shall be provided which will send a visual or audible signal to a constantly monitored location so that the water system operator will be advised of a primary power failure.

History Note: Authority G.S. 130A-315; 130A-317;
P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;

Amended Eff. June 30, 1980; March 31, 1980; January 1, 1978.

.1006 DISTRIBUTION SYSTEMS

(a) Water Pipe Materials. Distribution mains shall be cast iron, ductile iron, asbestos-cement, reinforced concrete, plastic or other material designed for potable water system service and shall be the appropriate AWWA standards, section C, or NSF Standards No. 14 and No. 15, or approved equal standards. Copies of AWWA standards are available from the American Water Works Association, 666 W. Quincy Avenue, Denver, Colorado 80235, at a cost of one hundred forty dollars ($140.00) per complete set for non-members or seventy dollars ($70.00) for members. Copies of NSF standards are available from the National Sanitation Foundation, NSF Building, Ann Arbor, Michigan 48105, at a cost of twenty-five dollars ($25.00) per complete set. Copies are available for public inspection at the principal address of the environmental health section, division of health services. The pressure rating class of the pipe shall be in excess of the maximum design pressure within that section of the water distribution system. The quality of pipe to be used shall be stated in the project specifications.

(b) Cross-Connections

(1) No potable water supply shall be connected by any means whatever to another source of water supply or to a storage facility unless such connection has been previously approved by the division of health services. No connection shall be made to any plumbing system that does not comply with the North Carolina State Building Code, volume II, or any applicable local plumbing code.

(2) No person shall introduce any water into the distribution system of a public water supply through any means other than from a source of supply duly approved by the Department of Human Resources or its representatives, or make a physical connection between an approved supply and unapproved supply unless authorized in an emergency by the Department of Human Resources or its representative.

(3) In cases where storage capacity is used only for non-potable purposes and there is installed either an elevated tank or a ground reservoir, the following precautions shall be taken:

(A) When the reservoir or elevated tank is filled from a supply other than a public water supply and the public water supply is used as a supplemental supply, the pipeline from the public water supply shall be installed in such a manner that the water will be discharged over the top or rim of the reservoir or elevated tank. There shall be a complete physical break between the outlet end of the fill pipe and the top or over-flow rim of the tank or reservoir of at least twice the inside diameter of the inlet pipe.

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(B) When the elevated tank or ground storage reservoir is filled entirely by water from a public water supply:

(i) If a covered ground reservoir or covered elevated storage tank is used, an approved reduced pressure back-flow preventor or an approved double check valve assembly may be used. The back-flow prevention device shall be installed in such a manner as to afford adequate protection and shall be easily accessible and shall include all necessary pressure gauges and drains for testing. Gate valves shall be installed in the line at both ends of the back-flow prevention device.

(ii) If an uncovered ground reservoir or uncovered elevated storage tank is used, a complete physical break shall be provided between the reservoir or elevated tank and the public supply. The physical break between the inlet pipe and the top or overflow rim of the reservoir shall be at least twice the diameter of the inlet pipe.

(4) All cross-connections between potable water supplies and non-potable or unprotected supplies which are not specifically covered in the categories in this Paragraph will be considered as special problems and the protective devices required will be determined by the Department of Human Resources on the basis of the degree of health hazard involved.

(5) Persons desiring to install non-potable water supplies in conjunction with a public water supply shall submit to the environmental health section, division of health services, detailed plans and specifications in triplicate showing the non-potable water supply and its relation to the potable water supply.

(6) Any such interconnection to a potable water system is subject to the approval of the water supplier and shall not be made until authorized by the water supplier in addition to the Department of Human Resources

History Note: Statutory Authority G.S. 130A-315;
130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. June 30, 1980.

.1007 ELECTRICAL SYSTEMS

Electrical wiring and equipment shall comply with applicable provisions of the national, state, and local electrical codes.

History Note: Statutory Authority G.S. 130A-315;
130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

SECTION .1100 - OPERATION OF PUBLIC WATER SUPPLIES

.1101 OPERATION REQUIRING DISINFECTION ONLY

(a) Operator in Charge. The operator in charge of a community water system requiring disinfection shall be capable of computing chlorine dosages and other chemical dosages that may be applied to the water. The operator shall be familiar with the entire water system, including pipelines, chlorinators and other appurtenances pertaining to the operation of the entire system. The operator shall hold a valid certificate issued by the North Carolina Water Treatment Facility Operators Certification Board.

(b) Tests; Reports. The operator shall make adequate residual chlorine tests and other applicable tests at least daily and shall report the results of the tests to the water supply branch division of health services in a monthly report which shall include pertinent information required by the Department of Human Resources. Copies of this report form indicating the required information may be obtained from the water supply branch, division of health services. A copy of each monthly report shall be submitted by the 10th day of the following month to the Water Supply Branch, Division of Health Services, P.O. Box 2091, Raleigh, North Carolina 27602.

History Note: Statutory Authority G.S. 130A-315; 90A-29; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. June 30, 1980; September 1, 1979.

.1102 OPERATION OF FILTERED COMMUNITY WATER SYSTEMS

(a) Operator in Charge. The person in responsible charge of operation of a community water system filtration plant where raw water is obtained from a class A-I or A-II stream as classified by the division of environmental management and removal of dissolved matter or suspended matter is required shall hold an appropriate valid certificate issued by the North Carolina Water Treatment Facility Operators Certification Board.

(b) Tests; Form. Adequate bacteriological and chemical tests and analysis of the water shall be made at least daily when the plant is operating and shall be reported to the water supply branch, division of health services in a monthly report which shall include pertinent information required by the Department of Human Resources. Copies of report forms indicating the required information may be obtained from the water supply branch, division of health services. A copy of each monthly report shall be submitted by the 10th day of the following month to the Water Supply Branch, Division of Health Services, P.O. Box 2091, Raleigh, North Carolina, 27602.

(c) Operation. An operator shall be on duty at the treatment facility whenever the treatment facility is in operation.

History Note: Statutory Authority G.S. 130A-315; 90A-29; P.L. 93-523;

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Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. June 30, 1980; September 1, 1979.

.1103 OPERATION OF COMMUNITY WATER SYSTEM WELLS

(a) Operator in Charge. The operator of a community water system well shall be capable of computing chlorine dosages and other chemical dosages which are applied to the water when such treatment is required. The operator shall be familiar with the entire water system, including pipelines, pumps, chlorinators, and other appurtenances pertaining to the operation of the entire water system. The operator shall hold a valid certificate issued by the North Carolina Water Treatment Facility Operators Certification Board.

(b) Tests; Forms. When application of chlorine and other chemicals are required, the operator shall make required residual chlorine tests and other tests at least daily and shall report his results to the water supply branch, division of health services in a monthly report which shall include pertinent information required by the division of health services. Copies of this report form indicating the required information may be obtained from the water supply branch, division of health services. A copy of each monthly report shall be submitted by the 10th day of the following month to the Water Supply Branch, Division of Health Services, P.O. Box 2091, Raleigh, North Carolina, 27602.

History Note: Statutory Authority G.S. 130A-315; 90A-29; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. June 30, 1980; September 1, 1979.

SECTION .1200 - PROTECTION OF UNFILTERED PUBLIC WATER SUPPLIES

.1201 WATERSHED AREA

No dwelling house, pasture, hog lot, cattle or horse barn, or other areas where domestic animals are confined or permitted, and no parks, camping grounds or other places of public assembly shall be permitted within the watershed area of an unfiltered community water system.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. September 1, 1979.

.1202 AUTHORIZED PERSONS WITHIN WATERSHED AREA

No persons, other than a duly authorized representative of the person or company supplying the water from an unfiltered community water system or a representative of the local health department, or the Department of Human Resources, or a game warden, state forester or law enforcement officer, or a representative of the U.S. Park Service or U.S. Forest Service shall be permitted within the area of the watershed of an unfiltered community water system at any time and for any purpose except as may be allowed under special permission issued by the Department of Human Resources.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. September 1, 1979.

.1203 HUNTING, FISHING, OR HIKING

Hunting, fishing, or hiking shall not be permitted.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1204 DISPOSAL OF CARCASSES

The carcass of any dead animal found within the watershed area of an unfiltered community water system shall be buried by the owner or person in charge of the animal and by the person owning or in charge of the land upon which the animal dies with a covering of at least three feet of earth, or the carcass shall be burned, or removed from the watershed and buried as required by G.S. 106-403. In no case shall dead animals be placed in the reservoir or the tributaries of an unfiltered community water system.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523;

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Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979.

.1205 PROHIBITED CONDUCT ON WATERSHED

No timbering, lumbering, construction, or reforestation operations shall be permitted on the watershed of an unfiltered community water system, except by the special permission of the Department of Human Resources. Written application for such permission shall be made by the owner of the water supply to the Director of the Division of Health Services. The applicant shall submit a project plan describing the nature and scope of the project and precautions for protection of the water supply. If approved, special rules and regulations governing the conduct of such work will be prescribed in order to provide for the sanitary and physical protection of the water supply during such operations.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979.

.1206 INSPECTION OF WATERSHEDS

The person or company supplying water from the watershed of an unfiltered source shall employ an adequate number of responsible inspectors and cause satisfactory inspection of the watershed to be made at least at quarterly intervals to assure that the watershed area is at all times maintained in a manner that will promote and insure the sanitary and physical protection of the supply. A copy of the watershed inspection report shall be submitted to the water supply branch, division of health services within 10 days after completion of the inspection.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

.1207 WATERSHED BOUNDARY SIGNS

Signs advising the public of the watershed boundaries and prohibiting trespassing by all unauthorized persons shall be posted at the water works intake and along the boundaries and at entrances and accesses throughout the watershed area of an unfiltered community water system. It shall be the duty of the watershed inspectors and other water supply officials to see that these signs are posted, replaced, and renewed when necessary.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979.

.1208 CONTINUOUS DISINFECTION OF WATER SUPPLY

The water supply shall be continuously disinfected by means of chlorination or by other methods approved by the Commission for Health Services. Equipment shall be provided to assure uninterrupted disinfection.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

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SECTION .1300 - PROTECTION OF FILTERED WATER SUPPLIES

.1301 RECREATIONAL ACTIVITIES

(a) No recreational activities shall be permitted on a class I or class II reservoir without a resolution by the Commission or without approval by the Department. The Department may approve recreational events on a class I or class II reservoir which last one day or less upon a showing that the recreational event will not adversely affect the quality of the water to the point of rendering it unsatisfactory as a source for a community water system. All other recreational activities on a class I or class II reservoir shall be permitted only upon a resolution by the Commission authorizing the activity.

(b) Upon request for such a resolution, the division of health services shall make or cause to be made a thorough investigation of the quality of the water to determine the extent to which the proposed recreational activities would adversely affect the quality of the water. If, after such investigation, the Commission for Health Services is of the opinion that the proposed recreational activities will not adversely affect the quality of the water to the point of rendering it unsatisfactory as a source of community water system, the Commission for Health Services may adopt a resolution authorizing the proposed recreational activities.

(c) Only those recreational activities specifically authorized in the resolution will be allowed. No recreational activities shall be permitted within 50 yards of any community water system intake.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. October 1, 1985; September 1, 1979.

.1302 MAINTENANCE OF PARKS

Parks or other places of resort for the use and entertainment of the public which may be established and maintained on a watershed shall be provided with sanitary facilities for the collection of garbage and disposal of sewage. Such facilities must, in the opinion of the division of health services, not cause deterioration of water quality and must meet requirements for approval by the division of health services. Persons in charge of such facilities must maintain strict compliance with the Commission for Health Services' sanitation requirements at all times in order to prevent the pollution of the community water system.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979.

.1303 FISHING

Fishing in a community water system reservoir may be permitted whenever the person owning such water supply complies with the conditions set forth in these Rules.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. September 1, 1979.

.1304 ANIMALS IN RESERVOIR

The watering, washing or wallowing of any horses, mules, cattle, or domestic animals shall not be permitted in or along the margin of any class I or class II reservoir. Domestic or farm animals shall be restrained from access to an area within 50 feet of the reservoir at normal full level.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1305 CONTROLLING THE DRAINAGE OF WASTES

In order to afford adequate protection for sources of public water supply, precautions shall be taken on the watershed in the vicinity of class I and class II reservoirs and water intakes located on unimpounded streams to control the drainage of wastes from animal and poultry pens or lots, into such sources.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1306 UNTREATED DOMESTIC SEWAGE OR INDUSTRIAL WASTES

No untreated domestic sewage or industrial wastes or by--products shall be discharged into any public water supply reservoir or stream classified as A-II. No hazardous waste or industrial by-products shall be stored in the watershed of an A-II stream unless precautions are taken to prevent its being spilled into or otherwise entering the raw water supply. No wastewater treatment plant effluent shall be discharged into any public water supply reservoir or stream classified as A-II without approval of the division of health services.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1307 BURIAL OF CARCASSES

The carcass of any dead animal found within the watershed shall

be buried by the owner or person in charge of the animal or the person owning or in charge of the land upon which the animal dies with a covering of a least three feet of earth or the carcass shall be burned or removed from the watershed and buried as required by G.S. 106-403. In no case shall dead animals be placed in the reservoir.

History Note: Statutory Authority G.S. 130A-315; 130A-320, P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1308 BURIAL GROUND

No burial ground shall be established on any watershed within 1,500 feet upstream from a public water supply intake on an unimpounded stream or within 300 feet of any class I or class II reservoir.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1309 SEWAGE DISPOSAL

Any residence, place of business or public assembly, located on a watershed shall be provided with a sanitary means of sewage disposal.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1310 DISPOSAL OF ANY SUBSTANCE

Disposal of or storage of any substance on a watershed of a public water supply that may, in the opinion of the division of health services, have a deleterious effect on the quality of the raw water shall be prohibited. The owner of the water supply shall be responsible for maintaining surveillance of the reservoirs and watersheds to insure protection of the water quality.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1311 PROTECTION OF WATER QUALITY

The issuance of a resolution by the Commission for Health Services for recreational activities on public water supply reservoirs shall be contingent upon the governing authority establishing provisions for adequate sanitation facilities, supervision and police control to insure the protection of the water quality.

History Note: Statutory Authority G.S. 130A-315;
130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

.1312 SEPTIC TANK SYSTEMS

(a) No septic tank system shall be approved for a residence (including a mobile home), place of business, or place of public assembly except on a lot containing at least 40,000 square feet of area suitable for septic tank system location and operation when the lot is on a watershed of a class I or class II reservoir or on the watershed of the portion of a class A-II stream extending from a class I reservoir to a downstream intake of a water purification plant. This requirement becomes effective whenever funds have been appropriated either for purchase of land or construction of a class I or class II reservoir.

(b) The Director of the Division of Health Services or his authorized representative, shall have authority, when special local factors permit or require it in order to protect the public health adequately and to ensure proper health and sanitary conditions, to vary the lot size requirements in particular cases upon a determination based on any of the following factors:

(1) soil conditions, terrain, water table, rock formations, and other characteristics of the area;
(2) size of the reservoirs;
(3) quantities and characteristics of the wastes;
(4) type of business, use, or activity;
(5) coverage of lot area by structures, parking lots and other improvements;
(6) type and location of the water supply; and
(7) other conditions or circumstances affecting the satisfactory operation of a septic tank system.

(c) The 40,000 square foot lot size requirement, where a septic tank is to be installed, does not apply to those portions of a water supply reservoir watershed which are drained by class B, class C, or class D streams.

History Note: Statutory Authority G.S. 130A-315;
130A-320, P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

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SECTION .1400 - PROTECTION OF BOTTLED WATER SUPPLIES

.1401 BOTTLING OR PACKAGING WATER
.1402 DISINFECTION
.1403 WATER SAMPLES

History Note: Statutory Authority G.S. 130-157 through 130-159;
Eff. January 1, 1977;
Amended Eff. January 24, 1977;
Readopted Eff. December 5, 1977;
Repealed Eff. December 17, 1979.

SECTION .1500 - FISHING IN PUBLIC WATER SUPPLY RESERVOIRS

.1501 PERMISSION TO FISH

Fishing shall not be permitted on any class I or class II public water supply reservoir without a resolution granting permission by the Commission for Health Services. In order to obtain permission, a written application shall be submitted by the owner of the water supply to the Commission for Health Services. Permission shall not be issued until a thorough investigation has been made by an authorized representative of the division of health services and a determination made that fishing in the reservoir will not adversely affect the water quality.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

.1502 ENFORCEMENT OF FISHING REQUIREMENTS

The application requesting permission to fish in any reservoir shall be accompanied by sufficient evidence (such as ordinances adopted by the applicant) to insure that the following requirements will be enforced by the applicant:

(1) Fishing will be permitted only from boats owned or controlled by the applicant. Boats will at all times be under the supervision and jurisdiction of a responsible representative of the applicant. Bank fishing may be permitted in restricted supervised areas with proper sanitation facilities when specifically approved by the Commission for Health Services.

(2) A sufficient number of wardens and watershed inspectors will be employed at all times to insure that no acts of urination, defecation or other acts which would defile the water supply are committed by any person while fishing in the public water supply reservoir.

(3) A fishing dock, or docks, will be provided or controlled by the applicant for the purpose of docking fishing boats. No boat shall enter or leave the reservoir except from a ramp owned or controlled by the applicant.

History Note: Statutory Authority G.S. 130A-315; 130A-320; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

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SECTION .1600 - WATER QUALITY STANDARDS

.1601 PURPOSE OF STANDARDS
.1602 MAXIMUM CONTAMINANT LEVELS OF INORGANIC CHEMICALS
.1603 FLUORIDATION
.1604 MAXIMUM CONTAMINANT LEVELS FOR COLIFORM BACTERIA
.1605 RECOMMENDED LIMITS FOR OTHER CHEMICAL SUBSTANCES
.1606 LIMIT FOR TURBIDITY
.1607 LIMIT FOR COLOR

History Note: Statutory Authority G.S. 130A-315; 130A-317;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. January 1, 1978;
Repealed Eff. September 1, 1979.

.1608 LIMIT FOR IRON AND MANGANESE
.1609 CORROSION CONTROL

History Note: Statutory Authority G.S. 130A-315; 130A-317;
Eff. January 1, 1978;
Repealed Eff. September 1, 1979.

.1610 PURPOSE

The purpose of this Section is to implement the provisions of the North Carolina Drinking Water Act.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979.

.1611 CONSTRUCTION

This Section shall be construed as enabling the State of North Carolina to undertake primary responsibility for the enforcement of the federal act.

History Note: Statutory Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979.

.1612 SITING REQUIREMENTS

(a) Any person constructing or modifying a public water system shall to the extent practicable, avoid locating all or part of a new or expanded facility at a site which:

(1) is subject to a significant risk from earthquakes, floods, fires or other disasters which could cause a breakdown of the public water system or a portion thereof; or

(2) except for intake structures, is within the floodplain of a 100-year flood or is lower than any recorded high tide where appropriate records exist.

(b) Additional requirements concerning the siting of raw water intakes shall be found in 10 NCAC 10D .1802.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 31, 1980.

.1613 MAXIMUM MICROBIOLOGICAL CONTAMINANT LEVELS

The maximum contaminant levels for coliform bacteria applicable to community water systems and non-community systems, are as follows:

(1) When the membrane filter technique pursuant to .1622(a) of this Section is used, the number of coliform bacteria shall not exceed any of the following:

(a) one per 100 milliliters as the arithmetic mean of all samples examined per compliance period pursuant to .1622(b) or (c) of this Section except at the Department's discretion systems required to take 10 or fewer samples per month may be authorized to exclude one positive routine sample per month from the monthly calculation if:

(i) as approved on a case-by-case basis the Department determines and states in writing to the public water system that no unreasonable risk to health existed under the conditions of this modification. This determination should be based upon a number of factors not limited to the following:

(A) the system provided and had maintained an active disinfectant residual in the distribution system;

(B) the potential for contamination as indicated by a sanitary survey; and

(C) the history of the water quality at the public water system (e.g. MCL or monitoring violations);

(ii) the supplier initiates a check sample on each of two consecutive days from the same sampling point within 24 hours after notification that the routine sample is positive, and each of these check samples is negative; and

(iii) the original positive routine sample is reported and recorded by the supplier pursuant to .1631(a) and .1632(1) of this Section. The supplier shall report to the Department its compliance with the conditions specified in this paragraph and a summary of the corrective action taken to resolve the prior positive sample result. If a positive routine sample is not used for the monthly calculation, another routine sample must be analyzed for compliance purposes. This provision may be used only once during two consecutive compliance periods.

(b) four per 100 milliliters in more than one sample when less than 20 are examined per month, or

(c) four per 100 milliliters in more than five percent of

the samples when 20 or more are examined per month.

(2) When the fermentation tube method and 10 milliliter standard portions pursuant to .1622(a) of this Section are used, coliform bacteria shall not be present in any of the following:

(a) more than 10 percent of the portions (tubes) in any one month pursuant to .1622(b) or (c) of this Section except at the Department's discretion, systems required to take 10 or fewer samples per month may be authorized to exclude one positive routine sample resulting in one or more positive tubes per month from the monthly calculation if:

(i) as approved on a case-by-case basis the Department determines and states in writing to the public water system that no unreasonable risk to health existed under the conditions of this modification. This determination should be based upon a number of factors not limited to the following:

(A) the system provided and had maintained an active disinfectant residual in the distribution system,

(B) the potential for contamination as indicated by a sanitary survey, and

(C) the history of the water quality at the public water system (e.g. MCL or monitoring violations);

(ii) the supplier initiates a check sample on each of two consecutive days from the sampling point within 24 hours after notification that the routine sample is positive, and each of these check samples is negative; and

(iii) the original positive routine sample is reported and recorded by the supplier pursuant to .1631(a) and .1632(1) of this Section. The supplier shall report to the Department its compliance with the conditions specified in this paragraph and report the action taken to resolve the prior positive sample result. If a positive routine sample is not used for the monthly calculation, another routine sample must be analyzed for compliance purposes. This provision may be used only once during two consecutive compliance periods.

(b) three or more portions in more than one sample when less than 20 samples are examined per month; or

(c) three or more portions in more than five percent of the samples when 20 or more samples are examined per month.

(3) When the fermentation tube method and 100 milliliter standard portions pursuant to .1622(a) of this Section are used, coliform bacteria shall not be present in any of the following:

(a) more than 60 percent of the portions (tubes) in any month pursuant to .1622(b) or (c) of this Section,

except at the Department's discretion, systems required to take 10 or fewer samples per month may be authorized to exclude one positive routine sample resulting in one or more positive tubes per month from the monthly calculation if:

(i) as approved on a case-by-case basis the Department determines and states in writing to the public water system that no unreasonable risk to health existed under the conditions of this modification. This determination should be based upon a number of factors not limited to the following:
  (A) the system provided and had maintained an active disinfectant residual in the distribution system,
  (B) the potential for contamination as indicated by a sanitary survey, and
  (C) the history of the water quality at the public water system (e.g. MCL or monitoring violations);

(ii) the supplier initiates two consecutive daily check samples from the same sampling point within 24 hours after notification that the routine sample is positive, and each of these check samples is negative; and

(iii) the original positive routine sample is reported and recorded by the supplier pursuant to .1631(a) and .1632(1) of this Section. The supplier shall report to the Department its compliance with the conditions specified in this paragraph and a summary of the corrective action taken to resolve the prior positive sample result. If a positive routine sample is not used for the monthly calculation, another routine sample must be analyzed for compliance purposes. This provision may be used only once during two consecutive compliance periods.

(b) five portions in more than one sample when less than five samples are examined per month, or

(c) five portions in more than 20 percent of the samples when five or more samples are examined per month.

(4) If an average MCL violation is caused by a single sample MCL violation, then the case shall be treated as one violation with respect to the public notification requirements of .1633 of this Section.

History Note: Authority G.S. 130A-315; P.L. 93-523
40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 31, 1981.

.1614 MAXIMUM CONTAMINANT LEVELS FOR TURBIDITY

The maximum contaminant levels for turbidity are applicable to both community water systems and non-community water systems using

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surface water sources in whole or in part. The maximum contaminant levels for turbidity in drinking water, measured at a representative entry point(s) to the distribution system, are:

(1) One turbidity unit (TU), as determined by a monthly average pursuant to .1623 of this Section except that five or fewer turbidity units may be allowed if the supplier of water can demonstrate to the department that the higher turbidity does not do any of the following:
   (a) interfere with disinfection,
   (b) prevent maintenance of an effective disinfectant agent throughout the distribution system, or
   (c) interfere with microbiological determinations.

(2) Five turbidity units based on an average for two consecutive days pursuant to .1623 of this Section.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979.

.1615 MAXIMUM CONTAMINANT LEVELS FOR ORGANIC CHEMICALS

The following are the maximum contaminant levels for organic chemicals. They apply only to community water systems. Compliance with maximum contaminant levels for organic chemicals is calculated pursuant to .1624 of this Section:

	Level, milligrams per liter
(1) Chlorinated hydrocarbons:	
Endrin (1,2,3,4,10, 10-hexachloro 6,7,-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, endo-5,8 - dimethano naphthalene).	0.0002
Lindane (1,2,3,4,5,6-hexachloro-cyclohexane, gamma isomer).	0.004
Methoxychlor (1,1,1-Trichloro-2,2 - bis (p-methoxyphenyl) ethane).	0.1
Toxaphene [C(10)H(10)Cl(8) Technical chlorinated camphene, 67-69 percent chlorine].	0.005
(2) Chlorophenoxys:	
2,4,D, (2,4-Dichlorophenoxyacetic acid).	0.1
2,4,5-TP Silvex (2,4,5-Trichloro phenoxypropionic acid).	0.01
(3) Total trihalomethanes (the sum of the concentrations of bromodichloromethane, dibromochloromethane, tribromomethane (bromoform) and trichloromethane (chloroform)).	0.10

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. September 30, 1980.

.1616 MAXIMUM CONTAMINANT LEVELS FOR INORGANIC CHEMICALS

(a) The maximum contaminant level for nitrate is applicable to both community water systems and non-community water systems except as provided by in paragraph (d). The levels for the other inorganic chemicals apply only to community water systems. Compliance with maximum contaminant levels for inorganic chemicals is calculated pursuant to .1625 of this Section.

(b) The following are the maximum contaminant levels for inorganic chemicals other than fluoride:

Contaminant	Level, milligrams per liter
Arsenic	0.05
Barium	1.
Cadmium	0.010
Chromium	0.05
Lead	0.05
Mercury	0.002
Nitrate (as N)	10
Selenium	0.01
Silver	0.05

(c) When the annual average of the maximum daily air temperatures for the location in which the community water system is situated is the following, the maximum contaminant levels for fluoride are:

Temperature Degrees Fahrenheit	Degrees Celsius	Level, Milligrams Per liter
53.7 and below	12.0 and below	2.4
53.8 to 58.3	12.1 to 14.6	2.2
58.4 to 63.8	14.7 to 17.6	2.0
63.9 to 70.6	17.7 to 21.4	1.8
70.7 to 79.2	21.5 to 26.2	1.6
79.3 to 90.5	26.3 to 32.5	1.4

Fluoride at optimum levels in drinking water has been shown to have beneficial effects in reducing the occurrence of tooth decay.

(d) At the discretion of the Department, nitrate levels not to exceed 20 mg/l may be allowed in a non-community water system if the supplier of water demonstrates to the satisfaction of the Department that:

(1) Such water will not be available to children under 6 months of age; and

(2) There will be continuous posting of the fact that nitrate levels exceed 10 mg/l and the potential health effects of exposure; and

(3) Local and state public health authorities will be notified annually of nitrate levels that exceed 10 mg/l; and

(4) No adverse health effects shall result.

History Note: Authority G.S. 130A-315; P.L. 93-523;
40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. October 1, 1982; April 1, 1982;
March 31, 1981; December 19, 1979.

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.1617 MAXIMUM CONTAMINANT LEVELS FOR RADIUM

The following are the maximum contaminant levels for radium-226, radium-228, and gross alpha particle radioactivity in community water systems:

(1) combined radium-226 and radium-228--5 pCi/l;

(2) gross alpha particle activity (including radium-226 but excluding radon and uranium)--15 pCi/l.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979.

.1618 MAXIMUM CONTAMINANT LEVELS FOR MAN-MADE RADIONUCLIDES

(a) The average annual concentration of beta particle and photon radioactivity from man-made radionuclides in community water systems shall not produce an annual dose equivalent to the total body or any internal organ greater than four millirem/year.

(b) Except for the radionuclides listed in Table A, the concentration of man-made radionuclides causing four mrem total body or organ dose equivalents shall be calculated on the basis of a two liter per day drinking water intake using the 168 hour data listed in "Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure" NBS HANDBOOK 69 as amended August 1963, U.S. Department of Commerce. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed 4 millirem/year:

TABLE A

Average annual concentrations assumed to produce a total body or organ dose of 4 mrem/yr.

Radionuclide	Critical Organ	pCi per liter
Tritium	Total Body	20,000
Strontium-90	Bone Marrow	8

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979.

.1619 CONCENTRATION OF IRON

The requirements of this Rule apply only to community water systems. A community water system which has an iron concentration in excess of 0.30 mg/l shall provide approved treatment to control the water quality. Analysis of samples shall be made on an as needed basis determined by the department. Such need basis shall include, but not be limited to, addition of a new well or other raw water source, approval of a new community water system, approval of an existing system not previously approved, or problems and complaints of water quality normally associated with iron concentration.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979.

.1620 CONCENTRATION OF MANGANESE

The requirements of this Rule apply only to community water systems. A community water system which has a manganese concentration in excess of 0.05 mg/l shall provide approved treatment to control the water quality. Analysis of samples shall be made on an as needed basis determined by the department. Such need basis shall include, but not be limited to, addition of a new well or other raw water source, approval of a new community water system, approval of an existing system not previously approved, or problems and complaints of water quality normally associated with manganese concentration.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. September 9, 1980.

.1621 CORROSION CONTROL: MONITORING CORROSIVITY CHARACTERISTICS

(a) Control and adjustment of pH shall be provided for community water systems having water with a pH below 6.5; such control and adjustment to be approved by the Department. Most waters are corrosive in varying degrees at pH 6.5 and slightly above and such waters should have pH adjustment.

(b) Suppliers of water for community water systems shall collect samples from a representative entry point to the water distribution system for the purpose of analysis to determine the corrosivity characteristics of the water:

(1) The supplier shall collect two samples per plant for analysis for each plant using surface water sources wholly or in part or more if required by the Department, one during mid-winter and one during mid-summer. The supplier of water shall collect one sample per plant for analysis for each plant using ground water sources or more if required by the Department. The minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may, with Department approval, be considered one treatment plant for determining the minimum number of samples.

(2) Determination of the corrosivity characteristics of the water shall include measurement of pH, calcium hardness, alkalinity, temperature, total dissolved solids (total filterable residue), and calculation of the Langelier Index in accordance with Paragraph (d). The determination of corrosivity characteristics shall only include one round of sampling (two samples per plant for surface water and one sample per plant for ground water sources). However, the Department may require

more frequent monitoring as appropriate, and may require monitoring for additional parameters which indicate corrosivity characteristics, such as sulfates and chlorides. In certain cases, the Aggressive Index, as described in Paragraph (d), can be used instead of the Langelier Index; the supplier shall request in writing to the Department which will make this determination.

(c) The supplier of water shall report to the Department the results of the analyses for the corrosivity characteristics within the first 10 days of the month following the month in which the sample results were received. If more frequent sampling is required by the Department, the supplier can accumulate the data and shall report each value within 10 days of the month following the month in which the analytical results of the last sample was received.

(d) Analyses conducted to determine compliance with this Rule shall be made in accordance with methods adopted by the United States Environmental Protection Agency and codified as 40 C.F.R. 141.42(c)(1) through (9) which are hereby adopted by reference as amended through March 12, 1982. A list of these methods is available from the Water Supply Branch, Environmental Health Section, Division of Health Services, P. O. Box 2091, Raleigh, North Carolina 27602.

(e) Community water supply systems shall identify whether the following construction materials are present in their distribution system and report to the Department:

(1) Lead from piping, solder, caulking, interior lining of distribution mains, alloys and home plumbing;
(2) Copper from piping and alloys, service lines, and home plumbing;
(3) Galvanized piping, service lines, and home plumbing;
(4) Ferrous piping materials such as cast iron and steel;
(5) Asbestos cement pipe;
(6) Vinyl lined asbestos cement pipe;
(7) Coal tar lined pipes and tanks.

(f) Community water systems in operation on the effective date of this Rule shall comply with the requirements of (b) and (e) within one year of the effective date. Community water systems which begin operation after the effective date shall comply with the requirements of (b) and (e) within one year of the date operation begins.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. October 1, 1982; February 27, 1982.

.1622 MICROBIOLOGICAL CONTAMINANT SAMPLING AND ANALYSIS

(a) Suppliers of water for community and non-community water systems shall analyze or use the services of a certified laboratory for coliform bacteria to determine compliance with .1613 of this section. Analyses shall be conducted in accordance

with the analytical recommendations set forth in "Standard Methods for the Examination of Water and Wastewater," American Public Health Association, 14th Edition, Method 908A, Paragraphs 1, 2 and 3, pp. 916-918; Method 908D, Table 908: I, p. 923; Method 909A, pp. 928-935, or "Microbiological Methods for Monitoring the Environment, Water and Wastes," U.S. EPA, Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268--EPA 600/8-78-017, December 1978. Available from ORD Publications, CERI, U.S. EPA, Cincinnati, Ohio 45268. Part III, Section B 1.0 through 2.6.2, pp. 108-112; 2.7 through 2.7.2(c), pp. 112-113; Part III, Section B 4.0 through 4.6.4(c), pp. 114-118, except that a standard sample size shall be employed. The standard sample used in the membrane filter procedure shall be 100 milliliters. The standard sample used in the 5 tube most probable number (MPN) procedure (fermentation tube method) shall be 5 times the standard portion. The standard portion is either 10 milliliters or 100 milliliters as described in .1613(b) and (c) of this Section. The samples shall be taken at points which are representative of the conditions within the distribution system.

(b) The supplier of water for a community water system shall take coliform density samples at regular time intervals, and in number proportionate to the population served by the system. In no event shall the frequency be less than as set forth below:

Population Served	Minimum Number of Samples Per Month
25 to 1,000	1
1,001 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 9,400	10
9,401 to 10,300	11
10,301 to 11,100	12
11,101 to 12,000	13
12,001 to 12,900	14
12,901 to 13,700	15
13,701 to 14,600	16
14,601 to 15,500	17
15,501 to 16,300	18
16,301 to 17,200	19
17,201 to 18,100	20
18,101 to 18,900	21
18,901 to 19,800	22
19,801 to 20,700	23
20,701 to 21,500	24
21,501 to 22,300	25
22,301 to 23,200	26
23,201 to 24,000	27
24,001 to 24,900	28

24,901 to 25,000---------- 29
25,001 to 28,000---------- 30
28,001 to 33,000---------- 35
33,001 to 37,000---------- 40
37,001 to 41,000---------- 45
41,001 to 46,000---------- 50
46,00 to 50,000---------- 55
50,001 to 54,000---------- 60
54,001 to 59,000---------- 65
59,001 to 64,000---------- 70
64,001 to 70,000---------- 75
70,001 to 76,000---------- 80
76,001 to 83,000---------- 85
83,001 to 90,000---------- 90
90,001 to 96,000---------- 95
96,001 to 111,000----------100
111,001 to 130,000----------110
130,001 to 160,000----------120
160,001 to 190,000----------130
190,001 to 220,000----------140
220,001 to 250,000----------150
250,001 to 290,000----------160
290,001 to 320,000----------170
320,001 to 360,000----------180
360,001 to 410,000----------190
410,001 to 450,000----------200
450,001 to 500,000----------210
500,001 to 550,000----------220
550,001 to 600,000----------230
600,001 to 660,000----------240
660,001 to 720,000----------250
720,001 to 780,000----------260
780,001 to 840,000----------270
840,001 to 910,000----------280
910,001 to 970,000----------290
970,001 to 1,050,000----------300
1,050,001 to 1,140,000----------310
1,140,001 to 1,230,000----------320
1,230,001 to 1,320,000----------330
1,320,001 to 1,420,000----------340
1,420,001 to 1,520,000----------350
1,520,001 to 1,630,000----------360
1,630,001 to 1,730,000----------370
1,730,001 to 1,850,000----------380
1,850,001 to 1,970,000----------390
1,970,001 to 2,060,000----------400
2,060,001 to 2,270,000----------410
2,270,001 to 2,510,000----------420
2,510,001 to 2,750,000----------430
2,750,001 to 3,020,000----------440
3,020,001 to 3,320,000----------450
3,320,001 to 3,620,000----------460
3,620,001 to 3,960,000----------470

3,960,001 to 4,310,000----------480
4,310,001 to 4,690,000----------490
4,690,001 or more----------500

(c) The supplier of water for a non-community water system shall be responsible for sampling coliform bacteria in each calendar quarter that the system provides water to the public. Such sampling shall begin within two years after August 27, 1980. The Department can adjust the monitoring frequency on the basis of a sanitary survey, the existence of additional safeguards such as a protective and enforced well code, or accumulated analytical data. Such frequency shall be confirmed or modified on the basis of subsequent surveys or data. The frequency shall not be reduced until the non-community water system has performed at least one coliform analysis of its drinking water and shown to be in compliance with .1613 of this Section.

(d) The supplier of water shall sample more frequently when:

(1) Coliform bacteria in a single sample exceeds four per 100 milliliters [.1613(1) of this Section] at least two consecutive daily check samples shall be collected and examined from the same sampling point. Additional check samples shall be collected daily, or at a frequency established by the secretary, until the results obtained from at least two consecutive check samples show less than one coliform bacterium per 100 milliliters;

(2) Coliform bacteria occur in three or more 10 ml portions of a single sample [.1613(2) of this Section], at least two consecutive daily check samples shall be collected and examined from the same sampling point. Additional check samples shall be collected daily, or at a frequency established by the secretary, until the results obtained from at least two consecutive check samples show no positive tubes.

(3) Coliform bacteria occur in all five of the 100 ml portions of a single sample [.1613(3) of this Section], at least two daily check samples shall be collected and examined from the same sampling point. Additional check samples shall be collected daily, or at a frequency established by the secretary until the results obtained from at least two consecutive check samples show no positive tubes.

(e) The location at which the check samples were taken pursuant to (d)(1), (2), or (3) of this Rule shall not be eliminated from future sampling without approval of the department. The results from all coliform bacterial analyses performed pursuant to (b) or (c) of this Rule, except those obtained from check samples and special purpose samples, shall be used to determine compliance with the maximum contaminant level for coliform bacteria as established in .1613 of this Section. Check samples shall not be included in calculating the total number of samples taken each month to determine compliance with .1622(b) or (c) of this Section.

(f) When the presence of coliform bacteria in water taken from

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a particular sampling point has been confirmed by any check samples examined as directed in (d)(1), (2), or (3) of this Rule, the supplier of water shall report to the department within 48 hours.

(g) When a maximum contaminant level set forth in (1), (2) or (3) of .1613 of this Section is exceeded, the supplier of water shall report to the department and notify the public as prescribed in .1631 and .1633 of this Section.

(h) Special purpose samples, such as those taken to determine whether disinfection practices following pipe placement, replacement, or repair have been sufficient, shall not be used to determine compliance with .1613 or .1622(b) or (c) of this Section.

(i) The Department has the authority to determine compliance or initiate enforcement action based upon analytical results or other information compiled by their sanctioned representatives and agencies.

History Note: Authority G.S. 130A-315; P.L. 93-523;
40 C.F.R. 141;
Eff. September 1, 1980;
Amended Eff. March 31, 1981; December 19, 1979.

.1623 TURBIDITY SAMPLING AND ANALYSIS

(a) The requirements of this Rule shall apply only to public water systems which use water obtained in whole or in part from surface sources.

(b) Samples shall be taken by suppliers of water for both community and non-community water systems at a representative entry point(s) to the water distribution system at least once per day, for the purpose of making turbidity measurements to determine compliance with .1614 of this Section. If the Department determines that a reduced sampling frequency in a non-community system will not pose a risk to public health, it can reduce the required sampling frequency. The option of reducing the turbidity frequency shall be permitted only in those public water systems that practice disinfection and which maintain an active residual disinfectant in the distribution system, and in those cases where the Department has indicated in writing that no unreasonable risk to health existed under the circumstances of this option. The turbidity measurements shall be made by the Nephelometric Method in accordance with the recommendations set forth in "Standard Methods for Examination of Water and Wastewater," American Public Health Association, 14th Edition, pp. 132-134; or Method 180.1, 1-Nephrometric Method.

(c) If the result of a turbidity analysis indicates that the maximum allowable limit has been exceeded, the sampling and measurement shall be confirmed by resampling as soon as practicable and preferably within one hour. If the repeat sample confirms that the maximum allowable limit has been exceeded, the supplier of water shall report to the department within 48 hours. The repeat sample shall be the sample used for the purpose of calculating the monthly average. If the monthly average of the daily samples exceeds the maximum allowable limit, or if the average of two samples taken on consecutive days exceeds five TU, the

supplier of water shall report to the department and notify the public as directed in .1631 and .1633 of this Section.

(d) Sampling for non-community water systems shall begin within two years after the effective date of the National Primary Drinking Water Regulations (40 C.F.R. 141.22, eff. June 24, 1977).

(e) The Department has the authority to determine compliance or initiate enforcement action based upon analytical results or other information compiled by their sanctioned representatives and agencies.

History Note: Authority G.S. 130A-315; P.L. 93-523;
40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 31, 1981; December 19, 1979.

.1624 ORGANIC CHEMICALS OTHER THAN TTHM, SAMPLING AND ANALYSIS

(a) An analysis of substances for the purpose of determining compliance with 10 NCAC 10D .1615 (1) and (2) shall be made as follows:

(1) For all community water systems utilizing surface water sources, analyses shall be completed within one year following the effective date of the National Primary Drinking Water Regulations (40 C.F.R. 141.24, eff. June 24, 1977). Samples analyzed shall be collected during the period of the year designated by the secretary as the period when contamination by pesticides is most likely to occur. These analyses shall be repeated at intervals specified by the secretary but in no event less frequently than at three year intervals.

(2) For community water systems utilizing only ground water sources, analyses shall be completed by those systems specified by the secretary.

(3) The Department has the authority to determine compliance or initiate enforcement action based upon analytical results and other information compiled by their sanctioned representatives and agencies.

(b) If the result of an analysis made pursuant to (a) of this Rule indicates that the level of any contaminant listed in 10 NCAC 10D .1615 (1) and (2) exceeds the maximum contaminant level, the supplier of water shall report to the department within seven days and initiate three additional analyses within one month.

(c) When the average of four analyses made pursuant to (b) of this Rule, rounded to the same number of significant figures as the maximum contaminant level for the substance in question, exceeds the maximum contaminant level, the supplier of water shall report to the department and give notice to the public pursuant to .1631 and .1633 of this Section. Monitoring after public notification shall be at a frequency designated by the secretary and shall continue until the maximum contaminant level has not been exceeded in two successive samples or until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

(d) Analyses made to determine compliance with .1615(1) and (2)

of this Section shall be made in accordance with methods adopted by the United States Environmental Protection Agency and codified as 40 C.F.R. 141.24(e) and (f) which are hereby adopted by reference as amended through March 12, 1982. A list of these methods is available from the water supply branch, Environmental Health Section, Division of Health Services, P.O. Box 2091, Raleigh, NC 27602.

History Note: Authority G.S. 130A-315; P.L. 93-523;
40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. October 1, 1982; March 31, 1981;
September 30, 1980; December 19, 1979.

.1625 INORGANIC CHEMICAL SAMPLING AND ANALYSIS

(a) Analyses for the purpose of determining compliance with Rule .1616 of this Section are required as follows:

(1) Analyses for all community water systems utilizing surface water sources shall be completed within one year following the effective date of the National Primary Drinking Water Regulations (40 C.F.R. 141.23, eff. June 24, 1977). These analyses shall be repeated at yearly intervals.

(2) Analyses for all community water systems utilizing only ground water sources shall be completed within two years following the effective date of the National Primary Drinking Water Regulations (40 C.F.R. 141.23, eff. June 24, 1977). These analyses shall be repeated at three year intervals.

(3) For non-community water systems, whether supplied by surface or ground sources, analyses for nitrate shall be completed by July 1, 1980. These analyses shall be repeated at intervals determined by the Department.

(4) The Department has the authority to determine compliance or initiate enforcement action based upon analytical results and other information compiled by its authorized representatives and agencies.

(b) If the result of an analysis made pursuant to (a) of this Rule indicates that the level of any contaminant listed in .1616 of this Section exceeds the maximum contaminant level, the supplier of water shall report to the department within seven days and initiate three additional analyses at the same sampling point within one month.

(c) When the average of four analyses made pursuant to (b) of this Rule, rounded to the same number of significant figures as the maximum contaminant level for the substance in question, exceeds the maximum contaminant level, the supplier of water shall notify the Department pursuant to .1631 of this Section and give notice to the public pursuant to .1633 of this Section. Monitoring after public notification shall be at a frequency designated by the secretary and shall continue until the maximum contaminant level has not been exceeded in two successive samples or until a monitoring schedule as a condition to a variance,

exemption or enforcement action shall become effective.

(d) The provisions of (b) and (c) of this Rule notwithstanding, compliance with the maximum contaminant level for nitrate shall be determined on the basis of the mean of two analyses. When a level exceeding the maximum contaminant level for nitrate is found, a second analysis shall be initiated within 24 hours, and if the mean of the two analyses exceeds the maximum contaminant level, the supplier of water shall report his findings to the department pursuant to .1631 of this Section and shall notify the public pursuant to .1633 of this Section.

(e) Analyses conducted to determine compliance with .1616, .1619, .1620, and .1621 of this Section shall be made in accordance with methods adopted by the United States Environmental Protection Agency and codified as 40 C.F.R. 141 23(f)(1) through (10) and 40 C.F.R. 143.4(b)(5), (6), and (8) which are hereby adopted by reference as amended through March 12, 1982. A list of these methods is available from the Water Supply Branch, Environmental Health Section, Division of Health Services, P.O. Box 2091, Raleigh, NC 27602.

History Note: Authority G.S. 130A-315; P.L. 93-523;
40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. April 1, 1983; October 1, 1982;
March 31, 1981; December 19, 1979.

.1626 ANALYTICAL METHODS FOR RADIOACTIVITY

(a) The methods specified in "INTERIM RADIOCHEMICAL METHODOLOGY FOR DRINKING WATER," Environmental Monitoring and Support Laboratory, EPA-600/4-75-008, USEPA, Cincinnati, Ohio 45268, or those listed below, are to be used to determine compliance with .1617 and .1618 of this Section except in cases where alternative methods have been approved in accordance with .1630 of this Section:

(1) Gross Alpha and Beta Method 302 "Gross Alpha and Beta Radioactivity in Water," STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, 14th Edition, American Public Health Association, New York, N.Y., 1975;

(2) Total Radium-Method 304 "Radium in Water Precipitation," STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, 14th Edition, American Public Health Association, New York, N.Y., 1975;

(3) Radium-226-Method 305 "Radium-226 by Radon in Water," STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, 14th Edition, American Public Health Association, New York, N.Y., 1975;

(4) Strontium-89, 90-Method 303 "Total Strontium and Strontium-90 in Water," STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, 14th Edition, American Public Health Association, New York, N.Y., 1975;

(5) Tritium-Method 306 "Tritium in Water," STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, 14th Edition, American Public Health Association, New York,

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N.Y., 1975;

(6) Cesium-134-ASTM D-2459 "Gamma Spectrometry in Water," 1975 ANNUAL BOOK OF ASTM STANDARDS, WATER AND ATMOSPHERIC ANALYSIS, Part 31, American Society for Testing and Materials, Philadelphia, PA (1975);

(7) Uranium-ASTM D-2907 "Micro-quantities of Uranium in Water by Fluorometry," STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTEWATER, 14th Edition, American Public Health Association, New York, N.Y., 1975.

(b) When the identification and measurement of radionuclides other than those listed in (a) of this Rule is required, the following references are to be used, except in cases where alternative methods have been approved in accordance with .1630 of this Section.

(1) PROCEDURES FOR RADIOCHEMICAL ANALYSIS OF NUCLEAR REACTOR AQUEOUS SOLUTIONS, H.L. Krieger and S. Godd, EPA-R4-73-014; USEPA, Cincinnati, Ohio, May 1973;

(2) HASL PROCEDURE MANUAL, Edited by John H. Harley, HASL 300, ERDA Health and Safety Laboratory, New York, N.Y. 1973.

(c) For the purpose of monitoring radioactivity concentrations in drinking water, the required sensitivity of the radioanalysis is defined in terms of a detection limit. The detection limit shall be that concentration which can be counted with a precision of plus or minus 100 percent at the 95 percent confidence level (1.96* where * is the standard deviation of the net counting rate of the sample):

(1) To determine compliance with .1617(1) of this Section the detection limit shall not exceed 1 pCi/l. To determine compliance with .1617(2) of this Section the detection limit shall not exceed 3 pCi/l.

(2) To determine compliance with .1618 of this Section the detection limits shall not exceed the concentrations listed in Table B:

TABLE B
DETECTION LIMITS FOR MAN-MADE BETA PARTICLE AND PHOTON EMITTERS

Radionuclide	Detection Limit
Tritium	1,000 pCi/l
Strontium-89	10 pCi/l
Strontium-90	2 pCi/l
Iodine-131	1 pCi/l
Cesium-134	10 pCi/l
Gross Beta	4 pCi/l
Other radionuclides	1/10 of the applicable limit

(d) To judge compliance with the maximum contaminant levels listed in .1617 and .1618 of this Section, averages of data shall be used and shall be rounded to the same number of significant figures as the maximum contaminant level for the substance in question.

(e) The Department has the authority to determine compliance or initiate enforcement action based upon analytical results or other

information compiled by its authorized representatives and agencies.

History Note: Authority G.S. 130A-315; P.L. 93-523;
40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 31, 1981;
March 31, 1980.

.1627 MONITORING FREQUENCY FOR RADIOACTIVITY

(a) Monitoring requirements for gross alpha particle activity, radium-226 and radium-228 in community systems:

(1) Initial sampling to determine compliance with .1617 shall begin within two years of the effective date of the National Primary Drinking Water Regulations (40 C.F.R. 141.26, eff. June 24, 1977) and the analysis shall be completed within three years of the effective date of the National Primary Drinking Water Regulations (40 C.F.R. 141.26, eff. June 24, 1977). Compliance shall be based on the analysis of an annual composite of four consecutive quarterly samples or the average of the analyses of four samples obtained at quarterly intervals:

(A) A gross alpha particle activity measurement may be substituted for the required radium-226 and radium-228 analysis, provided that the measured gross alpha particle activity does not exceed 5 pCi/l at a confidence level of .95 percent (1.65* where * is the standard deviation of the net counting rate of the sample). In localities where radium-228 may be present in drinking water, the department may require radium-226 and/or radium-228 analyses when the gross alpha particle activity exceeds 2 pCi/l;

(B) When the gross alpha particle activity exceeds 5 pCi/l, the same or an equivalent sample shall be analyzed for radium-226. If the concentration of radium-226 exceeds 3 pCi/l the same or an equivalent sample shall be analyzed for radium-228.

(2) Suppliers of water shall monitor at least once every four years following the procedure required by (a)(1) of this Rule. At the discretion of the secretary, when an annual record taken in conformance with (a)(1) of this Rule has established that the average annual concentration is less than half the maximum contaminant levels established by .1617 of this Section, analysis of a single sample may be substituted for the quarterly sampling procedure required by (a)(1) of this Rule:

(A) More frequent monitoring shall be conducted when ordered by the department in the vicinity of mining or other operations which may contribute alpha particle radioactivity to either surface or ground water sources of drinking water;

(B) A supplier of water shall monitor in conformance with (a)(1) of the Rule within one year of the introduction of a new water source for a community water system. More frequent monitoring shall be conducted when ordered by the department in the event of possible contamination or when changes in the distribution system or treatment processing occur which may increase the concentration of radioactivity in finished water;

(C) A community water system using two or more sources having different concentrations of radioactivity shall monitor source water, in addition to water from a free-flowing tap, when ordered by the department;

(D) Monitoring for compliance with .1617 of this Section after the initial period need not include radium-228 except when required by the department, provided that the average annual concentration of radium-228 has been assayed at least once using the quarterly sampling procedure required by (a)(1) of this Rule;

(E) Suppliers of water shall conduct annual monitoring of any community water system in which the radium-226 concentration exceeds 3 pCi/l, when ordered by the secretary.

(3) If the average annual maximum contaminant level for gross alpha particle activity or total radium as set forth in .1617 of this Section is exceeded, the supplier of a community water system shall give notice to the department pursuant to .1631 of this Section and notify the public as required by .1633 of this Section. Monitoring at quarterly intervals shall be continued until the annual average concentration no longer exceeds the maximum contaminant level or until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

(b) Monitoring requirements for man-made radioactivity in community water systems:

(1) Within two years of the effective date of the National Primary Drinking Water Regulations (40 C.F.R. 141.26, eff June 24, 1977), systems using surface water sources and serving more than 100,000 persons and such other community water systems as are designated by the secretary shall be monitored for compliance with .1618 of this Section by analysis of a composite of four consecutive quarterly samples or analysis of four quarterly samples. Compliance with .1618 of this Section may be assumed without further analysis if the average annual concentration of gross beta particle activity is less than 50 pCi/l and if the average annual concentrations of tritium and strontium-90 are less than those listed in Table A in .1618 of this Section provided that if both radionuclides are present the sum of their annual

dose equivalents to bone marrow shall not exceed 4 millirem/ year:

(A) If the gross beta particle activity exceeds 50 pCi/l, an analysis of the sample must be performed to identify the major radioactive constituents present and the appropriate organ and total body doses shall be calculated to determine compliance with .1618 of this Section;

(B) Suppliers of water shall conduct additional monitoring, as ordered by the secretary, to determine the concentration of man-made radioactivity in principal watersheds designated by the department;

(C) At the discretion of the secretary, suppliers of water utilizing only ground waters may be required to monitor for man-made radioactivity.

(2) After the initial analysis required by (b)(1) of this Rule, suppliers of water shall monitor at least every four years following the procedure given in (b)(1) of this Rule;

(3) Within two years of the effective date of the National Primary Drinking Water Regulations (40 C.F.R. 141.26, eff. June 24, 1977) the supplier of any community water system designated by the secretary as utilizing waters contaminated by effluents from nuclear facilities shall initiate quarterly monitoring for gross beta particle iodine-131 radioactivity and annual monitoring for strontium-90 and tritium:

(A) Quarterly monitoring for gross beta particle activity shall be based on the analysis of monthly samples or the analysis of a composite of three monthly samples. The former is recommended. If the gross beta particle activity in a sample exceeds 15 pCi/l, the same or an equivalent sample shall be analyzed for strontium-89 and cesium-134. If the gross beta particle activity exceeds 50 pCi/l, an analysis of the sample must be performed to identify the major radioactive constituents present and the appropriate organ and total body doses shall be calculated to determine compliance with .1618 of this Section;

(B) For iodine-131, a composite of five consecutive daily samples shall be analyzed once each quarter. As ordered by the secretary, more frequent monitoring shall be conducted when iodine-131 is identified in finished water;

(C) Annual monitoring for strontium-90 and tritium shall be conducted by means of the analysis of a composite of four consecutive quarterly samples or analysis of four quarterly samples. The latter procedure is recommended;

(D) The secretary may allow the substitution of environmental surveillance data taken in conjunction

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with a nuclear facility for direct monitoring of a man-made radioactivity by the supplier of water where the secretary determines such data is applicable to a particular community water system.

(4) If the average annual maximum contaminant level for man-made radioactivity set forth in .1618 of this Section is exceeded, the operator of a community water system shall give notice to the department pursuant to .1631 of this Section and to the public as required by .1633 of this Section. Monitoring at monthly intervals shall be continued until the concentration no longer exceeds the maximum contaminant level or until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. September 1, 1980;
December 19, 1979.

.1628 MONITORING OF CONSECUTIVE PUBLIC WATER SYSTEMS

(a) When a public water system supplies water to one or more other public water systems the department may modify the monitoring requirements imposed by this Section to the extent that the interconnection of the systems justifies treating them as a single system for monitoring purposes. Any modified monitoring shall be conducted pursuant to a schedule specified by the department and concurred in by the Administrator of the U.S. Environmental Protection Agency.

(b) All public water systems which purchase water for resale and which do not provide any treatment except booster chlorination will be required to perform bacteriological monitoring in accordance with .1622 of this Section.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979.

.1629 CERTIFIED LABORATORIES

(a) For the purpose of determining compliance with the requirements of this Section, samples may be considered only if they have been analyzed by a laboratory certified by the Environmental Protection Agency or the Division of Health Services laboratory certification unit except that measurements for turbidity, free chlorine residual, temperature and pH may be performed by any person acceptable to the Department.

(b) Nothing in this Section shall be construed to preclude the Department or any duly designated representative from taking samples or from using the results from such samples to determine compliance by a supplier of water with the applicable requirements of this Section.

History Note: Authority G.S. 130A-315; P.L. 93-523;
40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 31, 1981.

.1630 ALTERNATIVE ANALYTICAL TECHNIQUES

With the written permission of the secretary, concurred in by the Administrator of the U.S. Environmental Protection Agency, an alternate analytical technique may be employed. An alternate technique shall be acceptable only if it is substantially equivalent to the prescribed test in both precision and accuracy as it relates to the determination of compliance with any maximum contaminant level. The use of the alternate analytical technique shall not decrease the frequency of monitoring required by this Section.

History Note: Authority G.S. 130A-315; P.L. 93-523;
40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. March 31, 1981.

.1631 REPORTING REQUIREMENTS

(a) Except where a shorter period is specified in this part, the supplier of water shall report to the Department the results of any test measurement or analysis required by this part within the first ten days following the month in which the result is received, or within the first ten days following the end of the required monitoring period as stipulated by the Department, whichever of these is shortest.

(b) The supplier of water shall report to the department within 48 hours the failure to comply with any regulation of 10 NCAC 10D .1610 through .1634 (including failure to comply with monitoring requirements).

(c) The supplier of water is not required to report analytical results in cases where a state laboratory performs the analysis and reports the results to the Department.

(d) The water supply system, within ten days of completion of each public notification required pursuant to .1633 of this Section, shall submit to the Department a representative copy of each type of notice distributed, published, posted, and/or made available to the persons served by the system and/or to the media.

(e) The water supply system shall submit to the Department within the time stated in the request copies of any records required to be maintained under Rule .1632 of this Section or copies of any documents then in existence which the Department or the administrator is entitled to inspect pursuant to the authority of Section 1445 of the Federal Safe Drinking Water Act or of G.S. 130A-17.

History Note: Authority G.S. 130A-315; P.L. 93-523;
40 C.F.R. 141;
Eff. September 1, 1979;
Amended Eff. October 1, 1984, March 31, 1981;

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.1632 RECORD MAINTENANCE

Any owner or operator of a public water system shall retain on its premises or at a convenient location near its premises the following records:

(1) Records of bacteriological analyses made pursuant to this Section shall be kept for not less than five years. Records of chemical analyses made pursuant to this Section shall be kept for not less than 10 years. Records of radiological analyses made pursuant to this Section shall be kept for not less than 10 years. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, provided that the following information is included:
   (a) the date, place and time of sampling, and the name of the person who collected the sample;
   (b) identification of the sample as to whether it was a routine distribution system sample, check sample, raw or process water sample or other special purpose sample;
   (c) date of analysis;
   (d) laboratory and person responsible for performing analysis;
   (e) the analytical technique/method used; and
   (f) the results of the analysis.

(2) Records of action taken by the system to correct violations of primary drinking water regulations shall be kept for a period not less than three years after the last action taken with respect to the particular violation involved.

(3) Copies of any written reports, summaries or communications relating to sanitary surveys of the system conducted by the system itself, by a private consultant, or by a local, state or federal agency, shall be kept for a period not less than 10 years after completion of the sanitary survey involved.

(4) Records concerning a variance or exemption granted to the system shall be kept for a period ending not less than five years following the expiration of such variance or exemption.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. September 1, 1979.

.1633 PUBLIC NOTIFICATION REQUIREMENTS

(a) Public notification by a supplier of water is required whenever a supplier's public water system fails to comply with a maximum contaminant level, fails to comply with an applicable testing procedure, is granted a variance or an exemption, or fails to comply with the requirements of any schedule prescribed pursuant to a variance or exemption.

(b) Community water systems shall comply with (a) of this Rule by meeting the following requirements:

(1) Notification shall be made by inclusion of a notice in the first set of water bills of the system issued after the failure or grant. Such notice shall be repeated at least once every three months so long as the system's failure continues or the variance or exemption remains in effect. If the system issues water bills less frequently than quarterly, or does not issue water bills, the notice shall be made by or supplemented by another form of direct mail.

(2) In addition, when the failure is to comply with a maximum contaminant level, then further notice shall be provided as follows:

(A) by publication on not less than three consecutive days in a newspaper or newspaper of general circulation in the area served by the system, such notice shall be completed within 14 days after the supplier of water learns of the failure;

(B) by furnishing a copy of the notice to the radio and television stations serving the area served by the system, such notice shall be furnished within seven days after the supplier of water learns of the failure;

(C) except that the requirements of (b)(2) of this Rule may be waived by the Department if it determines that the violation has been corrected promptly after discovery, the cause of the violation has been eliminated, and there is no longer a risk to public health.

(3) When the area served by a system is not served by a daily newspaper of general circulation, notification required by (b)(2)(A) of this Rule shall instead be given by publication on three consecutive weeks in a weekly newspaper of general circulation serving the area. If no weekly or daily newspaper of general circulation serves the area, notice shall be given by posting the notice in post offices within the area served by the system.

(c) Non-Community water systems shall comply with (a) of this Rule by conspicuous posting of a notice, in a location where it may be seen by consumers. Said notice shall be posted for so long as the violation, or the variance or exemption continues.

(d) Notices given pursuant to this Rule shall be written in a manner reasonably designed to inform fully the users of the system. The notice shall be conspicuous and shall not use unduly technical language, unduly small print or other methods which would frustrate the purpose of the notice. The notice shall disclose all material facts regarding the subject including the nature of the problem and, where appropriate, a clear statement that a drinking water regulation has been violated and any preventive measures that should be taken by the public. Where designated by the secretary, bilingual notice shall be given. Notices may include a balanced explanation of the significance or seriousness to the public health, a fair explanation of steps

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taken by the system to correct any problem and the results of any additional sampling.

(e) Notices required by this Rule may be given by the secretary on behalf of the supplier of water.

(f) The requirements of this Rule shall not apply to .1619, .1620, and .1621(a) of this Section.

(g) In any instance in which notification by mail is required by (b)(1) of this Rule but notification by newspaper or to radio or television stations is not required by (b)(2) of this Rule, the secretary may order the supplier of water to provide notification by newspaper and to radio and television stations when circumstances make more immediate or broader notice appropriate to protect the public health.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141; Eff. September 1, 1979; Amended Eff. March 31, 1981; December 19, 1979.

.1634 VARIANCES AND EXEMPTIONS

Variances and exemptions from a maximum contaminant level or required treatment technique may be requested by a public water system and may be granted by the secretary in accordance with 10 NCAC 10D .2501 through .2511.

History Note: Authority G.S. 130A-315; P.L. 93-523; 40 C.F.R. 141; Eff. September 1, 1979.

.1635 TOTAL TRIHALOMETHANES SAMPLING AND ANALYSIS

(a) Community water systems which serve a population of 10,000 or more individuals and which add a disinfectant (oxidant) to the water in any part of the drinking water treatment process shall analyze for total trihalomethanes (TTHMs) in accordance with this Rule. For systems serving 75,000 or more individuals, sampling and analyses shall begin not later than November 29, 1980. For systems serving 10,000 to 74,999 individuals, sampling and analyses shall begin not later than November 29, 1982. For the purpose of this Rule, the minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may, with Department approval, be considered one treatment plant for determining the minimum number of samples. All samples taken within an established frequency shall be collected within a 24-hour period.

(b) For all community water systems utilizing surface water sources in whole or in part, and for all community water systems utilizing only ground water sources that have not been determined by the Department to qualify for the monitoring requirements of (c) of this Rule, analyses for TTHMs shall be made as follows:

(1) Analyses shall be performed at quarterly intervals on at least four water samples for each treatment plant

used by the system. At least 25 percent of the samples shall be taken at locations within the distribution system reflecting the maximum residence time of the water in the system. The remaining 75 percent shall be taken at representative locations in the distribution system, taking into account number of persons served, different sources of water and different treatment methods employed. The results of all analyses per quarter shall be arithmetically averaged and reported to the Department within 30 days of the system's receipt of such results. All samples collected shall be used in the computation of the average, unless the analytical results are invalidated for technical reasons. Sampling and analyses shall be conducted in accordance with the methods listed in (e) of this Rule.

(2) Upon the written request of a community water system, the monitoring frequency required by (b)(1) of this section may be reduced by the Department to a minimum of one sample analyzed for TTHMs per quarter taken at a point in the distribution system reflecting the maximum residence time of the water in the system, upon a written determination by the Department that the data from at least 1 year of monitoring in accordance with (b)(1) of this Rule and local conditions demonstrate that total trihalomethane concentrations will be consistently below the maximum contaminant level.

(3) If at any time during which the reduced monitoring frequency prescribed under this paragraph applies, the results from any analysis exceed 0.10 mg/l of TTHMs and such results are confirmed by at least one check sample taken promptly after such results are received, or if the system makes any significant change to its source of water or treatment program, the system shall immediately begin monitoring in accordance with the requirements of (b)(1) of this Rule, which monitoring shall continue for at least 1 year before the frequency may be reduced again. At the option of the Department, a system's monitoring frequency may and should be increased above the minimum in those cases where it is necessary to detect variations of TTHM levels within the distribution system.

(c) Upon written request to the Department, a community water system utilizing only ground water sources may seek to have the monitoring frequency required by (b)(1) of this Rule reduced as follows:

(1) There shall be a minimum of one sample for maximum TTHM potential per year for each treatment plant used by the system taken at a point in the distribution system reflecting maximum residence time of the water in the system. The system shall submit to the Department the results of at least one sample analyzed for maximum TTHM potential for each treatment plant used by the system taken at a point in the distribution system

reflecting the maximum residence time of the water in the system. The system's monitoring frequency may only be reduced upon a written determination by the Department that, based upon the data submitted by the system, the system has a maximum TTHM potential of less than 0.10 mg/l and that, based upon an assessment of the local conditions of the system, the system is not likely to approach or exceed the maximum contaminant level for total TTHMs. The results of all analyses shall be re- ported to the Department within 30 days of the system's receipt of such results. All samples collected shall be used for determining whether the system must comply with the monitoring requirements of (b) of this Rule, unless the analytical results are invalidated for tech- nical reasons. Sampling and analyses shall be con- ducted in accordance with the methods listed in (e) of this Rule.

(2) If at any time during which the reduced monitoring frequency prescribed under (c)(1) of this Rule applies, the results from any analysis taken by the system for maximum TTHM potential are equal to or greater than 0.10 mg/l, and such results are confirmed by at least one check sample taken promptly after such results are received, the system shall immediately begin monitoring in accordance with the requirements of (b) of this Rule and such monitoring shall continue for at least one year before the frequency may be reduced again. In the event of any significant change to the system's raw water or treatment program, the system shall immediately analyze an additional sample for maximum TTHM potential taken at a point in the distribution system reflecting maximum residence time of the water in the system for the purpose of determining whether the system must comply with the monitoring requirements of (b) of this Rule. At the option of the Department, monitoring frequencies may and should be increased above the minimum in those cases where this is necessary to detect variation of TTHM levels within the distribution system.

(d) Compliance with 10 NCAC 10D .1615(3) shall be determined based on a running annual average of quarterly samples collected by the system as prescribed in (b)(1) or (2) of this Rule. If the average of samples covering any 12 month period exceeds the maximum contaminant level, the supplier of water shall report to the Department pursuant to 10 NCAC 10D .1631 and notify the public pursuant to 10 NCAC 10D .1633. Monitoring after public notification shall be at a frequency designated by the Department and shall continue until a monitoring schedule as a condition to a variance, exemption or enforcement action shall become effective.

(e) Sampling and analyses made pursuant to this section shall be conducted by one of the following EPA approved methods:

(1) "The Analysis of Trihalomethanes in Drinking Waters by the Purge and Trap Method," Method 501.1, Environmental

Monitoring and Support Laboratory, EPA Cincinnati, Ohio.

(2) "The Analysis of Trihalomethanes in Drinking Water by Liquid/Liquid Extraction," Method 501.2, Environmental Monitoring and Support Laboratory, EPA Cincinnati, Ohio.

Samples for TTHM shall be dechlorinated upon collection to prevent further production of trihalomethanes, according to the procedures described in the above two methods. Samples for maximum TTHM potential should not be dechlorinated, and should be held for seven days at 25 C or above prior to analysis, according to the procedures described in the above two methods.

(f) Before a community water system makes any significant modifications to its existing treatment process for the purposes of achieving compliance with 10 NCAC 10D .1615(3), such system must submit and obtain Department approval of a detailed plan setting forth its proposed modification and those safeguards that it will implement to ensure that the bacteriological quality of the drinking water served by such system will not be adversely affected by such modification. Each system shall comply with the provisions set forth in the Department approved plan. At a minimum, a Department approved plan shall require the system modifying its disinfection practice to:

(1) Evaluate the water system for sanitary defects and evaluate the source water for biological quality;

(2) Evaluate its existing treatment practices and consider improvements that will minimize disinfectant demand and optimize finished water quality throughout the distribution system;

(3) Provide baseline water quality survey data of the distribution system. Such data should include the results from monitoring for coliform and fecal coliform bacteria, fecal streptococci, standard plate counts at 35 C and 20 C, phosphate, ammonia nitrogen and total organic carbon. Virus studies should be required where source waters are heavily contaminated with sewage effluent;

(4) Conduct additional monitoring to assure continued maintenance of optimal biological quality in finished water, for example, when chloramines are introduced as disinfectants or when pre-chlorination is being discontinued. Additional monitoring should also be required by the Department for chlorate, chlorite and chlorine dioxide when chlorine dioxide is used as a disinfectant. Standard plate count analyses should also be required by the Department as appropriate before and after any modifications;

(5) Consider inclusion in the plan of provisions to maintain an active disinfectant residual throughout the distribution system at all times during and after the modification.

(g) The maximum contaminant levels for trihalomethanes set forth in 10 NCAC 10D .1615 shall take effect November 29, 1981 for

community water systems serving 75,000 or more individuals, and November 29, 1983 for community water systems serving 10,000 to 74,999 individuals.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Effective September 30, 1980;
Amended Eff. April 1, 1983.

.1636 SPECIAL MONITORING FOR SODIUM

(a) Suppliers of water for community water systems shall collect and analyze one sample per plant at the entry point of the distribution system for the determination of sodium concentration levels. Samples must be collected and analyzed annually for systems utilizing surface water sources in whole or in part, and at least every three years for systems utilizing solely ground water sources. The minimum number of samples required to be taken by the system shall be based on the number of treatment plants used by the system, except that multiple wells drawing raw water from a single aquifer may, with Department approval, be considered one treatment plant for determining the minimum number of samples. The supplier of water may be required by the Department to collect and analyze water samples for sodium more frequently in locations where the sodium content is variable.

(b) The supplier of water shall report to the Department the results of the analyses for sodium within the first 10 days of the month following the month in which the sample results were received or within the first 10 days following the end of the required monitoring period as stipulated by the Department, whichever is first. If more than annual sampling is required the supplier shall report the average sodium concentration within 10 days of the month following the month in which the analytical results of the last sample used for the annual average was received.

(c) The Department shall notify appropriate local health officials of the sodium levels found in community water systems.

(d) Analyses conducted to determine compliance with this Rule shall be made in accordance with methods adopted by the United States Environmental Protection Agency and codified as 40 C.F.R. 141.41(d) which is hereby adopted by reference as amended through August 27, 1980. A list of these methods is available from the Water Supply Branch, Environmental Health Section, Division of Health Services, P. O. Box 2091, Raleigh, North Carolina 27602.

History Note: Authority G.S. 130A-315;
P.L. 93-523; 40 C.F.R. 141;
Eff. February 27, 1982.

.1637 TREATMENT TECHNIQUES FOR TOTAL TRIHALOMETHANES

(a) The following have been identified as the best technology, treatment techniques or other means generally available for achieving compliance with 10 NCAC 10D .1615(3):

(1) Use of chloramines as an alternate or supplemental disinfectant or oxidant;

(2) Use of chlorine dioxide as an alternate or supplemental disinfectant or oxidant;
(3) Improved existing clarification for THM precursor reduction;
(4) Moving the point of chlorination to reduce TTHM formation and, where necessary, substituting for the use of chlorine as a pre-oxidant chloramines, chlorine dioxide or potassium permanganate;
(5) Use of powdered activated carbon for THM precusor or TTHM reduction seasonally or intermittently at dosages not to exceed 10 mg/L on an annual average basis.

(b) A community water system shall install and/or use any treatment method identified in Paragraph (a) of this Rule as a condition for granting a variance unless the Secretary determines that such treatment method is not available and effective for TTHM control for the system. A treatment method shall not be considered to be "available and effective" for an individual system if the treatment method would not be technically appropriate and technically feasible for that system or would only result in a marginal reduction in TTHM for the system. If upon application by a system for a variance, the Secretary determines that none of the treatment methods identified in Paragraph (a) of this Rule is available and effective for the system, that system shall be entitled to a variance under the provisions of 10 NCAC 10D .2500. The Secretary's determination as to the availability and effectiveness of such treatment methods shall be based upon studies by the system and other relevant information. If a system submits information intending to demonstrate that a treatment method is not available and effective for TTHM control for that system, the Secretary shall make a finding whether this information supports a decision that such treatment method is not available and effective for that system before requiring installation and/or use of such treatment method.

(c) Pursuant to 10 NCAC 10D .2504 (c) through (g), the Secretary shall issue a schedule of compliance that may require the system being granted the variance to examine the following treatment methods to determine the probability that any of these methods will significantly reduce the level of TTHM for that system, and if such probability exists, to determine whether any of these methods are technically feasible and economically reasonable, and that the TTHM reductions obtained will be commensurate with the costs incurred with the installation and use of such treatment methods for that system:
(1) Introduction of off-line water storage for THM precusor reduction;
(2) Aeration for TTHM reduction, where geographically and environmentally appropriate;
(3) Introduction of clarification where not currently practiced;
(4) Consideration of alternative sources of raw water;
(5) Use of ozone as an alternate or supplemental disinfectant or oxidant.

(d) If the Secretary determines that a treatment method identified in Paragraph (c) of this Rule is technically feasible, economically reasonable and will achieve TTHM reductions commensurate with the costs incurred with the installation and/or use of such treatment method for the system, the Secretary shall require the system to install and/or use that treatment method in connection with a compliance schedule issued under the provisions of 10 NCAC 10D .2500. The Secretary's determination shall be based upon studies by the system and other relevant information. In no event shall the Secretary require a system to install and/or use a treatment method not described in Paragraphs (a) or (c) of this Rule to obtain or maintain a variance from 10 NCAC 10D .1615(3) or in connection with any variance compliance schedule.

History Note: Authority G.S. 130A-315; P.L. 93-523;
40 C.F.R. 141;
Eff. October 1, 1983.

SECTION .1700 - WATER SUPPLY DESIGN GUIDELINES

.1701 PURPOSE

For the protection of the public health, and pursuant to authority granted by Article 13D of Chapter 130 of the General Statutes of North Carolina, the Commission for Health Services hereby adopts the following rules (10 NCAC 10D .1700 through .2200) governing the location of sources of supply of community water systems, the design and construction of community water systems, the operation of community water systems, and the protection of community water systems.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979.

.1702 DESIGN GUIDELINES

These design guidelines are intended to supplement the mandatory criteria established in the rules providing for the protection of community water systems (10 NCAC 10D .0700 through .1600) as adopted by the Commission for Health Services, and are to be used as recommended guidelines in the preparation of plans and specifications for community water systems.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. September 1, 1979; January 1, 1978.

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12.03-01/26/1

SECTION .1800 - RAW SURFACE WATER FACILITIES

.1801 IMPOUNDMENT; PRE-SETTLING RESERVOIRS

Where impoundment of the water supply stream does not or will not provide a raw water of acceptable quality, a pre-settling or pre-treatment reservoir located outside the watershed or catchment area may be required.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1802 RAW WATER INTAKES

(a) Stream Intakes. The intake structure for unimpounded streams shall be constructed so that it will not be affected by flood water or damaged by floating debris. It shall be located and designed to minimize entrance of sand, silt, fish and debris. A bar screen or grating shall be provided, with the area of the openings designed to restrict the entrance velocity to 30 feet per minute or less.

(b) Reservoir Intakes. Where water quality variations affecting the treatment process will occur at different depths of a reservoir, the intake structure shall be constructed with multiple inlets that can be readily opened and closed for selection of the optimum water quality level. A bar screen or grating shall be provided, with the area of the openings designed to restrict the entrance velocity to 50 feet per minute or less.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1803 INTAKE CONDUITS

The pipes, tunnels or flumes used for intake conduits shall be designed to conduct water at self-cleaning velocities of at least two feet per second. A screen, accessible for cleaning, shall be provided to protect the pumps.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1804 PUMPS; POWER FACILITIES

At least two pumping units with necessary check valves, gate valves, piping and appurtenances shall be provided for both raw water and finished water. Auxiliary facilities shall be provided

to supply power or to provide other means to satisfy the design minimum water needs of the system.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

Doc No: CLEJ-00561-12.03-01/26/87

SECTION .1900 - SURFACE WATER TREATMENT FACILITIES

.1901 FLASH OR RAPID MIXING FACILITY

Mixing shall be adequate to obtain rapid and thorough dispersal of the chemicals in the raw water before it enters the flocculation basins. The design of the flash mix facilities shall provide sufficient and efficient transfer of energy to the water to effect thorough mixing.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1902 AIR MIXING

Diffused air mixing may be used only in conjunction with mechanical or baffled mixers.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1903 MECHANICAL FLOCCULATION

(a) Basin Inlet and Outlet. The design of inlets and outlets of flocculation basins shall prevent short circuiting of the water and destruction or deterioration of the floc.

(b) Detention Period. The flocculation basins should have a theoretical detention period of not less than 20 minutes.

(c) Agitator Control. The agitators of flocculation basins shall be equipped with variable speed controls.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1904 BAFFLED MIXING AND FLOCCULATION BASINS

(a) Detention Period. The theoretical detention period of baffled mixing and flocculation shall be at least 25 minutes.

(b) Velocities

(1) The velocity of the water between the baffles shall be as follows:

(A) first third of basin -- 1.5 feet per second;

(B) second third of basin -- 0.75 feet per second; and

(C) last third of basin -- 0.4 to 0.5 feet per second.

(2) The velocity of the water under and over the baffles shall not exceed the velocity between the baffles.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1905 CONDUITS; PIPES AND FLUMES; GATES AND VALVES

Conduits conducting flocculated or coagulated water to sedimentation basins shall have sufficient capacity to limit velocity of flow to 0.5 foot per second. The optimum velocity to prevent both the breaking up and the settling of the floc is considered to be 0.5 foot per second.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1906 SEDIMENTATION BASIN

(a) Inlets. Inlets to sedimentation basins shall be designed to dissipate inlet velocities before the diffusion walls or before other entrance arrangements designed to provide uniform flow across the basins.

(b) Detention Period. A theoretical detention period of four hours shall be considered to be a minimum standard unless evidence, acceptable to the division of health services, is presented to support approval of a lower period of detention.

(c) Bottom of Basin. The bottom of the basin shall be adequately sloped and provided with drain valve or valves for ready removal of sludge.

(d) Outlet. Sedimentation basin outlets shall consist of submerged weirs or orifices. The equivalent rate of flow over or through the outlet device should not exceed 20,000 gallons per day per foot of equivalent weir length.

(e) Overflow. The sedimentation basins shall be equipped with an overflow pipe or pipes to limit the maximum water level over the filters and to prevent flooding above the walls of filters and basins.

History Note: Statutory Authority G.S. 130A-315, 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.1907 SOLIDS CONTACT OR UP-FLOW UNITS

(a) Approval of Solids Contact or Up-Flow Units. Solids contact or up-flow clarification units shall be approved only where raw water characteristics are substantially constant and shall not be approved for raw waters that have wide and rapid variations in turbidity or other qualities that would adversely affect the treatment process.

(b) Water Rise Rate. The rise rate shall not exceed 1.0 gallon per minute per square foot of clarification area.

(c) Weir Loading. Weir loading shall not exceed seven gallons per minute per foot of weir length. Horizontal flow to the collection trough shall not exceed 10 feet.

(d) Speed Agitator Equipment. Mixing and flocculation shall be accomplished by means of adjustable, variable speed agitator equipment.

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(e) Sludge Withdrawal. Sludge withdrawal equipment shall include an intermittent sludge removal mechanism controlled by an adjustable automatic timer.

(f) Basin Drain. The basin should be provided with a bottom drain that is of sufficient size to empty the basin in two hours or less.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

.1908 GRAVITY FILTERS

(a) Filtration Rates. The standard rate of filtration for a single media filter shall be two gallons per minute per square foot. Higher filtration rates up to four gallons per minute per square foot may be approved for dual media or multi-media filters.

(b) Wash Water Rate. The backwash rate of flow shall be designed to theoretically expand the filter media 50 percent.

(c) Rate Control Devices. Rate control equipment shall be provided to control or regulate the filtration rate and the backwash rate.

(d) Surface Washers. Filter beds shall be equipped with a revolving or fixed system of nozzles designed for uniform waterjet agitation of the entire beds.

(e) Gauges and Flow Indicators. Gauges or meters shall be installed to indicate the rate of filtration, the loss of head, and backwash rate for every filter.

(f) Filter Sand. Filter sand shall be clean silica sand having:

(1) an effective size of 0.35 mm to 0.55 mm,
(2) a uniformity coefficient of not more than 1.70,
(3) a dust content (passing 150 mesh tyler) less than 0.5 percent, and
(4) a depth of a least 24 inches and generally not more than 30 inches.

(g) Anthracite Filter Media. If anthracite coal is used as a single filter media, it shall have an effective size of 0.35 mm to 0.55 mm and a uniformity coefficient of 1.70 or less. Minimum depth of the media shall be 24 inches.

(h) Dual Media or Multi-media Filters. Dual media and mixed media filter beds may have a wider range of gradation than single media beds. Particle sizes may range from 0.15 mm to 1.2 mm within the beds. Influent water quality shall be considered in specifying particle sizes of mixed media beds. The minimum depth of the filer media should be 24 inches.

(i) Supporting Media and Underdrain System. The underdrain system and layers of gravel or other media supporting the filer media shall be designed to provide uniform filtration and uniform backwash throughout the filter media.

(j) Wash Water Troughs Elevation. The elevation of the bottom of the wash water troughs for new installations shall be above the maximum level of the expanded media during washing at the normal

design wash water rate. The elevation of the top of the wash water troughs shall provide a two-inch freeboard above the expanded media at the maximum rate of wash.

(k) Turbidity Monitoring. Turbidimeters employing the nephelometric method, or measurement of the intensity of scattered light, should be provided for the continuous determination of the turbidities of filtered water from each filter unit.

(l) Sampling Tap. A tap shall be installed for convenient sampling of the effluent from each filter.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. January 1, 1978.

.1909 PREVENTION OF BACKFLOW AND BACK-SIPHONAGE

The following methods and devices for prevention of backflow or back-siphonage shall be provided for the conditions indicated:

(1) Dry Chemical Feeders. Dry chemical feeders with submerged water inlets shall have a non-pressure type vacuum breaker installed on the atmospheric side of the last control valve.

(2) Fluoride Chemical Feeders.

(a) Sodium fluoride saturator tank make-up water lines shall have air gaps between the overflow rim of the tank and the water supply pipe of at least four inches.

(b) When using the positive displacement fluoride chemical solution feed pumps, if the point of application to the water supply is at atmospheric pressure and is below the maximum elevation of the solution in the fluoride solution tank, an air gap shall be installed in the fluoride discharge line at a point above the liquid level in the tank. If the point of application is a pressure line, than a pressure type vacuum breaker shall be used.

(3) Filter Surface Wash Agitators. Either a non-pressure type vacuum breaker shall be installed on the atmospheric side of the last control valve of each agitator, or pressure type vacuum breaker or an approved backflow preventer shall be installed on the pipe line supplying only the agitators.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

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SECTION .2000 - HYDROPNEUMATIC STORAGE TANKS

.2001 CAPACITIES; DETERMINING MINIMUM EFFECTIVE VOLUME

The minimum effective volume of pressure tanks, in gallons, shall equal the peak demand, in gallons per minute, minus the pumping capacity (gpm), multiplied by 20.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.2002 CAPACITIES; DETERMINING PEAK DEMAND

There are charts available from the water supply branch, environmental health section, division of health services, which shall be used to determine the peak demand for residential communities and mobile home parks.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. June 30, 1980.

.2003 CAPACITIES; DETERMINING TOTAL VOLUME

The total volume of the pressure tank shall be calculated by using the principle of Boyle's Law or by using the curves indicating air-water volume relationships available from the water supply branch, environmental health section, division of health services. The total volume (gallons) shall be not less than 25 times the number of connections or 500 gallons, whichever is greater for a mobile home park. In the case of a residential community (community water system) the total volume shall not be less than 40 times the number of connections or 500 gallons, whichever is greater.

History Note: Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977; Amended Eff. March 31, 1980.

.2004 CAPACITIES; GROUND STORAGE PLUS HYDROPNEUMATIC TANKS

When ground level storage tanks and high-service pumps are to be used, hydropneumatic tanks shall be sized in relation to peak demand and the high-service pump capacity in accordance with the procedures outlined in .2001 to .2003 of this Section.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.2005 CAPACITIES; ELEVATED STORAGE

(a) Where feasible, elevated storage capacity should meet the requirements of Fire Insurance Rating Bureau.

(b) The minimum capacity of elevated storage in a small municipality should be 75,000 gallons or a one-day supply, whichever is greater.

(c) The elevated storage for a large municipality should be sufficient to minimize the effect of fluctuating demand plus provide a reasonable reserve for fire protection. The combined elevated and ground storage of finished water should be at least one day's supply.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1978.

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SECTION .2100 - DISTRIBUTION SYSTEMS

.2101 SIZE OF THE WATER MAINS

Water distribution mains shall be sized to provide a minimum pressure at all points within the distribution system of not less than 20 pounds per square inch (gauge) during periods of peak demand (fire flow), but in any case water mains shall not be less than two-inch standard nominal diameter. Fire hydrants shall not be installed on water mains of less than six inches diameter or on water mains or water systems not designed to carry fire protection flows. Systems not designed for fire flows shall have the capacity to maintain a pressure of at least 30 pounds per square inch (gauge) throughout the system during periods of peak flow.

History Note: Authority G.S. 130A-315; 130A-317;
P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. March 31, 1980.

.2102 NUMBER OF RESIDENCES ON A WATER MAIN

(a) No more than 20, or the equivalent of 20 residences shall be connected to a two-inch diameter water line, unless the main is looped or otherwise supplied from two connections with mains of adequate capacities.

(b) A looped two-inch main shall serve no more than 40 residences, or the equivalent water demand of 40 residences. A two-inch diameter main shall not exceed 1000 feet in length.

History Note: Statutory Authority G.S. 130A-315;
130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. January 1, 1978.

.2103 DEAD-END WATER MAINS

Where installation of dead-end water mains cannot be avoided, a hydrant or a valve of adequate size for flushing shall be installed at the terminal end of the line. The flush valves shall have an above-ground discharge and shall be protected from contamination.

History Note: Statutory Authority G.S. 130A-315;
130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

.2104 PIPE LAYING

Trenching, pipe laying, and backfilling shall be accomplished in a manner to prevent damage and misalignment of the pipe. Water mains shall be buried to a depth below the frostline or to a depth sufficient to provide a minimum of 30 inches cover, whichever is greater.

History Note: Statutory Authority G.S. 130A-315;
130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

.2105 TESTING NEW WATER MAINS

New water mains shall be tested for leakage and any necessary repairs and re-testing shall be accomplished as specified in AWWA standards.

History Note: Statutory Authority G.S. 130A-315;
130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

.2106 RELATION OF WATER MAINS TO SEWERS

(a) Lateral Separation of Sewers and Water Mains. Water mains shall be laid at least 10 feet laterally from existing or proposed sewers, unless local conditions or barriers prevent a 10-foot lateral separation--in which case:

(1) The water main is laid in a separate trench, with the elevation of the bottom of the water main at least 18 inches above the top of the sewer; or

(2) The water main is laid in the same trench as the sewer with the water main located at one side on a bench of undisturbed earth, and with the elevation of the bottom of the water main at least 18 inches above the top of the sewer.

(b) Crossing a Water Main Over a Sewer. Whenever it is necessary for a water main to cross over a sewer, the water main shall be laid at such an elevation that the bottom of the water main is at least 18 inches above the top of the sewer, unless local conditions or barriers prevent an 18 inch vertical separation--in which case both the water main and sewer shall be constructed of ferrous materials and with joints that are equivalent to water main standards for a distance of 10 feet on each side of the point of crossing.

(c) Crossing a Water Main Under a Sewer. Whenever it is necessary for a water main to cross under a sewer, both the water main and the sewer shall be constructed of ferrous materials and with joints equivalent to water main standards for a distance of 10 feet on each side of the point of crossing. A section of water main pipe shall be centered at the point of crossing.

History Note: Statutory Authority G.S. 130A-315;
130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

.2107 VALVES

(a) Valves should be installed on all branches from feeder mains and between mains and hydrants according to the following schedule:

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(1) three valves at x (crosses),
(2) two valves at T's (tees), and
(3) one valve on single hydrant branch.

(b) All valves installed in water distribution systems should meet the appropriate AWWA Standards C 500-71 (adopted in 1971) C 504-74 (adopted in 1974) and C 507-73 (adopted in 1973) of the American Water Works Association, Inc., or approved equal standards. Copies of AWWA standards are available from the American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado 80235, at a cost of one hundred forty dollars ($140.00) per complete set for non-members or seventy dollars ($70.00) for members. Copies are available for public inspection at the principal address of the environmental health section, division of health services. Further, all valves must be installed in such a manner as to be readily accessible, preferably, the use of an appropriate valve box and cover.

History Note: Authority G.S. 130A-315, 130A-317;
P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. March 31, 1980.

SECTION .2200 - DISINFECTION OF WATER SUPPLY SYSTEMS

.2201 DISINFECTION OF NEW SYSTEMS

(a) All interior surfaces of new potable water supply systems, including wells, filters, storage tanks and distribution lines shall be thoroughly disinfected by means of hypochlorite or chlorine solutions, after which bacteriological test samples shall be collected.

(b) After disinfection the water supply shall not be placed into service until bacteriological test results of representative water samples analyzed in an approved laboratory are found to be satisfactory.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 95-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.2202 DISINFECTION OF WELLS

(a) After water supply wells have been cleaned of foreign substances, including sediment, grease and oil, the wells shall be disinfected by the addition of chlorine solution in concentrations sufficient to produce a chlorine residual of at least 50 milligrams per liter (or ppm) in the entire water column within the well casing.

(b) The chlorine solution shall remain in the well for a period of 24 hours. Then the well shall be pumped until the water is free of chlorine.

(c) A representative sample or samples of the water shall be collected. If bacteriological tests indicate that the water is satisfactory the well may be placed in service.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523; Eff. January 1, 1977; Readopted Eff. December 5, 1977.

.2203 DISINFECTION OF STORAGE TANKS AND DISTRIBUTION SYSTEMS

(a) Water distribution systems, including storage tanks and water mains, after flushing to remove sediment and other foreign matter, and after testing for leaks, shall be disinfected by the addition and thorough dispersion of a chlorine solution in concentrations sufficient to produce a chlorine residual of at least 50 milligrams per liter (or ppm) in the water throughout the distribution system, including all water mains and storage tanks.

(b) The chlorine solution shall remain in contact with interior surfaces of the water system for a period of 24 hours. Then the water system shall be flushed with fresh water from an approved water source until the chlorine solution is dispelled.

(c) Representative samples of the water shall then be collected. If bacteriological tests of the samples indicate that the water quality is satisfactory, the water mains and storage tanks may be placed in service.

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(d) In unusual situations where large volume tanks are involved and where there is not sufficient water available to fill the tank or there is not available a suitable drainage area for the chlorinated water, an alternate disinfection procedure for tanks may be proposed. Such proposal must be submitted in writing completely describing the proposed disinfection procedure and substantiating the need for an alternate procedure in the particular circumstance. Such alternate procedure must be approved before being implemented. The conclusion of the department shall be final.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977;
Amended Eff. January 1, 1978.

.2204 DISINFECTION OF FILTERS

(a) After filters have been thoroughly backwashed to remove dust, silt and other foreign matter the entire filter (including filter media, supporting material and underdrain system) shall be disinfected by application of a chlorine solution having a concentration of at least 50 milligrams per liter (or ppm).

(b) The solution shall be dispersed throughout the filter bed and remain in contact for a period of at least 24 hours.

History Note: Statutory Authority G.S. 130A-315; 130A-317; P.L. 93-523;
Eff. January 1, 1977;
Readopted Eff. December 5, 1977.

SECTION .2400 - ADMINISTRATIVE PENALTIES

.2401 DEFINITIONS

As used in the following rules, the term:

(1) "Delegate" means any person to whom the department has delegated authority in writing to act in its stead in relation to civil penalties;

(2) "Hearing officer" means the division of health services hearing officer;

(3) "Respondent" means the person against whom a penalty has been assessed.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.

.2402 ADMINISTRATIVE PENALTIES

The following rules provide the procedures and standards governing the assessment, remission, mitigation and appeal of administrative penalties imposed by the Department of Human Resources or its delegates or under G.S. 130A-22(b) for violations of the North Carolina Drinking Water Act, Article 10 of Chapter 130A and 10 NCAC 10D .0500 through .2300.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.
Amended Eff. October 1, 1984.

.2403 WHO MAY ASSESS PENALTIES

Administrative penalties may be assessed by the department or its delegate.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.

.2404 WHEN PENALTIES MAY BE ASSESSED

Administrative penalties may be assessed against any person for violations as prescribed in G.S. 130A-325.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.
Amended Eff. October 1, 1984.

.2405 AMOUNT OF PENALTY ASSESSMENT

(a) An administrative penalty may not exceed the amount which may be assessed for violations as prescribed in G.S. 130A-22(b).

(b) Each day of a continuing violation shall constitute a separate violation.

(c) Each violation of a specific provision of Article 10 of Chapter 130A, the rules issued thereunder, and any order pursuant thereto, shall be a separate violation.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.

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Amended Eff. October 1, 1984.

.2406 CONSIDERATIONS IN ASSESSING ADMINISTRATIVE PENALTIES

In determining the amount of the assessment the department or its delegates shall consider the following criteria and shall cite which provisions are applicable:

(1) nature of the violation and the degree and extent of the harm, including but not limited to the following:
  (a) for a violation of the North Carolina Drinking Water Act, Article 10 of Chapter 130A, and the rules adopted thereunder:
    (i) type of violation,
    (ii) type of contaminant involved,
    (iii) duration,
    (iv) cause (whether resulting from a negligent, reckless or intentional act or omission),
    (v) potential effect on public health and the environment,
    (vi) effectiveness of responsive measures taken by the violator,
    (vii) damage to private property,
    (viii) size of the water system and population exposed;
  (b) for a violation of an order issued under the North Carolina Drinking Water Act, Article 10 of Chapter 130A:
    (i) subject matter of order;
    (ii) duration;
    (iii) cause (whether resulting from a negligent, reckless or intentional act or omission);
    (iv) type of violation, if any;
    (v) potential effect on public health and the environment;
    (vi) effectiveness of responsive measures taken by violator;
  (c) for refusing to allow an authorized representative of the commission for health services, any local board of health, or the Department of Human Resources a right of entry as provided for in G.S. 130A-17;
    (i) type of other violation, if any,
    (ii) duration of refusal,
    (iii) potential effect on public health and the environment;
  (d) for failure to give adequate public notice as required by G.S. 130A-324:
    (i) inadequacy of type of notice,
    (ii) misleading in nature,
    (iii) delay in providing notice,
    (iv) potential effect on public health from failure to give adequate notice;
(2) cost of rectifying any damage;
(3) the violator's previous record in complying or not complying with the North Carolina Drinking Water Act, Article 10 of Chapter 130A and the regulations adopted thereunder.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.
Amended Eff. October 1, 1984.

.2407 PROCEDURE FOR ASSESSMENT

(a) Depending on the violation involved, the department or its delegates may issue a notice of penalty assessment immediately or grant the violator a period of time within which to cease the violation.

(b) For all violations for which a penalty is assessed a notice of such action shall be sent the respondent by registered or certified mail. The notice shall describe the nature of the violation with reasonable particularity, the amount of the penalty for each violation, that each day of a continuing violation constitutes a separate violation, advise that the penalty is now due or that it will become due at the end of a specified time, and advise the respondent of his rights of appeal as specified in 10 NCAC 1B .0200.

(c) The department or its delegates may modify a penalty upon finding that additional or different facts should have been considered in determining the amount of the assessment.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.

.2408 IMMINENT HAZARD

If violation of the rules or law presents an imminent hazard to the public health as determined by the secretary, an order may be issued pursuant to G.S. 130A-322.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.
Amended Eff. October 1, 1984.

.2409 PAYMENT; HEARING; REMISSION/MITIGATION

(a) Within 30 days after receipt of notification of a penalty assessment, the respondent must tender payment, submit in writing a request for an administrative hearing specifying all the factual or legal issues in dispute, or submit in writing a request for an administrative hearing on remission or mitigation of the penalty stating the reasons why such request is justified. Where a hearing is requested, it shall be held in accordance with rules contained in 10 NCAC 1B .0200.

(b) Payment may be tendered in conjunction with a hearing request and in such case, the payment will be accepted as conditional upon final action.

(c) This Rule shall not preclude informal conferences concerning the penalty assessed.

(d) Whenever an administrative hearing is scheduled, to avoid undue costs and delay, the respondent will be required to state all the issues in dispute and the department will be required to hold only one administrative hearing.

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(e) The department will acknowledge the receipt of all payments.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.

.2410 STAY OF PENALTY ASSESSMENT

When an administrative hearing is requested for a purpose other than remission or mitigation of the penalty assessed, the penalty will be stayed as of the date of said request until service of the final decision in accordance with Rule .0200, Subchapter 1B of this Title or other settlement of the matter.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.

.2411 CONTINUANCE; WAIVER OF ADMINISTRATIVE HEARING

(a) Notwithstanding Rule .0207, Subchapter 1B of this Title, the respondent may for good cause request a continuance of the hearing. Such request must be made in writing and be received by the hearing officer at least five days before the scheduled hearing. The hearing officer will determine if such a continuance should be granted or denied and shall so inform the respondent of its decision at least one day prior to the scheduled hearing.

(b) A respondent waives his right to a hearing when he:

(1) submits a written waiver to the department or its delegates of his right to an administrative hearing,

(2) fails to request a hearing within 30 days of receipt of notice of penalty assessment as provided for in Rule .0126 of this Subchapter, or

(3) fails to attend a scheduled administrative hearing.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.

.2412 REFERRAL

If any administrative penalty as finally assessed is not paid within 60 days after receipt of notice of penalty assessment where no administrative hearing was requested or within 60 days after service of a written copy of the decision as provided for in G.S. 150A-36 where an administrative hearing was requested, the secretary shall request the Attorney General to commence an action to recover the amount of the assessment.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. September 1, 1979.

.2413 RIGHT OF ENTRY AND INSPECTION

(a) Any supplier of water or other person subject to drinking water regulations shall, at any time, allow the secretary, or a designated representative, upon presenting appropriate credentials and a written notice of inspection, to enter any establishment, facility or other property of such supplier or other person to

determine whether such supplier or other person has acted or is acting in compliance with the requirements of the North Carolina Drinking Water Act (G.S. 130A-311 through 130A-328) or the rules of 10 NCAC 10D. Such inspection may include inspection, at reasonable times, of records, files, papers, processes, controls and facilities, or testing of any feature of a public water system, including its raw water source.

(b) If entry is refused, then the secretary or designated representative may obtain an administrative search warrant pursuant to the requirements of G.S. 15-27.2.

History Note: Authority G.S. 130A-22(f);
Eff. December 19, 1979.
Amended Eff. October 1, 1984.

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SECTION .2500 - VARIANCES AND EXEMPTIONS

.2501 REQUIREMENTS FOR A VARIANCE

(a) The secretary may grant one or more variances to any public water system within the state from any requirement respecting a maximum contaminant level of an applicable rule of 10 NCAC 10D .1610 through .1634 upon a finding that:

(1) Because of characteristics of the raw water sources which are reasonably available to the system, the system cannot meet the requirements respecting the maximum contaminant levels of such drinking water regulations despite application of the best technology, treatment techniques, or other means, which the secretary, with the concurrence of the administrator, finds are generally available (taking costs into consideration); and

(2) The granting of a variance will not result in an unreasonable risk to the health of persons served by the system.

(b) The secretary may grant one or more variances to any public water system within the state from any requirement of a specified treatment technique of an applicable rule of 10 NCAC 10D .1610 through .1634 upon a finding that the public water system applying for the variance has demonstrated that such treatment technique is not necessary to protect the health of persons because of the nature of the raw water source of such systems.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; 40 C.F.R. 142;
Eff. September 1, 1979;
Amended Eff. December 19, 1979.

.2502 VARIANCE REQUEST

A supplier of water may request a variance for a public water system by submitting a written request to the secretary. Suppliers of water may submit a joint request for variances when they seek similar variances under similar circumstances. A request for a variance or variances shall include the following information:

(1) the nature and duration of variance requested;

(2) relevant analytical results of water quality sampling of the system, including results of relevant tests conducted pursuant to the rules of 10 NCAC 10D .1610 through .1634;

(3) for any request made under .2501(a) of this Section:

(a) explanation in full and evidence of the best available treatment technology and techniques;

(b) economic and legal factors relevant to ability to comply;

(c) analytical results of raw water quality relevant to ability to comply;

(d) a proposed compliance schedule, including the date each step toward compliance will be achieved; such schedule shall include as a minimum the following dates:

(i) date by which arrangement for alternative raw water source or improvement of existing raw water

source will be completed,

(ii) date of initiation of the connection of the alternative raw water source or improvement of existing raw water source,

(iii) date by which final compliance is to be achieved;

(e) a plan for the provision of safe drinking water in the case of an excessive rise in the contaminant level for which the variance is requested;

(f) a plan for interim control measures during the effective period of variance;

(4) for any request made under .2501(b) of this Section, a statement that the system will perform monitoring and other reasonable requirements prescribed by the secretary as a condition to the variance;

(5) other information, if any, believed to be pertinent by the applicant;

(6) such other information as the secretary may require.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; 40 C.F.R. 142;
Eff. September 1, 1979.

.2503 CONSIDERATION OF A VARIANCE REQUEST

(a) The secretary shall act on any variance request submitted pursuant to .2502 of this Section within 90 days of receipt of the request.

(b) In consideration of whether the public water system is unable to comply with a contaminant level required by 10 NCAC 10D .1610 through .1634 because of the nature of the raw water source, the secretary shall consider such factors as the following:

(1) the availability and effectiveness of treatment methods for the contaminant for which the variance is requested;

(2) cost and other economic consideration such as implementing treatment, improving the quality of the source water or using an alternate source.

(c) In consideration of whether a public water system should be granted a variance to a required treatment technique because such treatment is unnecessary to protect the public health, the secretary shall consider such factors as the following:

(1) quality of the water source including water quality data and pertinent sources of pollution,

(2) source protection measures employed by the public water system.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; 40 C.F.R. 142;
Eff. September 1, 1979.

.2504 DISPOSITION OF A VARIANCE REQUEST

(a) If the secretary decides to deny the application for a variance, the applicant shall be notified of the intention to issue a denial. Such notice shall include a statement of reasons for the

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proposed denial. Within 30 days after the receipt of such notice, the applicant may request a hearing for the purpose of contesting the proposed denial. Such hearing shall be conducted in the manner set forth in G.S. 150A-23 through 150A-52. If no hearing is requested by the applicant within the 30 day period, the application shall be denied.

(b) If the secretary proposes to grant a variance request submitted pursuant to .2502 of this Section, the applicant shall be notified of the decision in writing. Such notice shall identify the variance, the facility covered, and shall specify the period of time for which the variance will be effective:

(1) For the type of variance specified in .2501(a) of this Section, such notice shall provide that the variance will be terminated when the system comes into compliance with the applicable regulation, and may be terminated upon a finding by the secretary that the system has failed to comply with any requirements of a final schedule issued pursuant to .2505 of this Section.

(2) For the type of variance specified in .2501(b) of this Section, such notice shall provide that the variance may be terminated at any time upon a finding that the nature of the raw water source is such that the specified treatment technique for which the variance was granted is necessary to protect the health of persons or upon a finding that the public water system has failed to comply with monitoring and other requirements prescribed by the secretary as a condition to the granting of the variance.

(c) For a variance specified in .2501(a)(1) of this Section, the department shall propose a schedule for:

(1) compliance (including increments of progress) by the public water system with each contaminant level requirement covered by the variance, and

(2) implementation by the public water system of such control measures as the department may require for each contaminant covered by the variance.

(d) The proposed schedule for compliance shall specify dates by which steps towards compliance are to be taken, including at the minimum, where applicable:

(1) date by which arrangement for an alternative raw water source or improvement of existing raw water source will be completed,

(2) date of initiation of the connection for the alternative raw water source or improvement of the existing raw water source,

(3) date by which final compliance is to be achieved.

(e) The proposed schedule may, if the public water system has no access to an alternative raw water source, and can effect or anticipate no adequate improvement of the existing raw water source, specify an indefinite time period for compliance until new and effective treatment technology is developed at which time a new compliance schedule shall be prescribed by the secretary.

(f) The proposed schedule for implementation of interim control

measures during the period of variance shall specify interim treatment techniques, methods and equipment, and dates by which steps toward meeting the interim control measures are to be met.

(g) The schedule shall be prescribed by the secretary within one year after the granting of the variance, subsequent to provision of opportunity for hearing pursuant to .2505 of this Section.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; 40 C.F.R. 142;
Eff. September 1, 1979.

.2505 PUBLIC HEARINGS ON VARIANCES AND SCHEDULES

(a) Before a variance or a schedule proposed by the secretary pursuant to .2504 of this Section may take effect, the secretary shall provide notice and opportunity for public hearing on the variance or schedule. Such notice may cover the granting of more than one variance, and a hearing held pursuant to such notice shall include each of the variances covered by that notice.

(b) Public notice of an opportunity for hearing on a variance or schedule shall be circulated in a manner designed to inform interested and potentially interested persons of the proposed variance or schedule and shall include at least the following:

(1) Posting of a notice in the principal post office of each municipality or area served by the public water system, and publishing of a notice in a newspaper or newspapers of general circulation in the area served by the public water system; and

(2) Mailing of a notice to the water supply branch, division of health services and to other appropriate state or local agencies at the department's discretion;

(3) Such notice shall include a summary of the proposed variance or schedule and shall inform interested persons that they may request a public hearing on the proposed variance or schedule.

(c) Requests for hearing may be submitted by any interested person. Frivolous or insubstantial requests for hearing may be denied by the secretary. Requests must be submitted to the secretary within 30 days after issuance of the public notice provided for in (b) of this Rule. Such requests shall include the following information:

(1) the name, address and telephone number of the individual, organization or other entity requesting a hearing;

(2) a brief statement of the interest of the person making the request in the proposed variance or schedule and of information that the requesting person intends to submit at such hearing;

(3) the signature of the individual making the request or if the request is made on behalf of an organization or other entity, the signature of a responsible official of the organization or other entity.

(d) Any hearing held pursuant to a request submitted by an interested person. or on the secretary's own motion shall be

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conducted in the manner set forth in G.S. 150A-23 through 150A-52.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; 40 C.F.R. 142;
Eff. September 1, 1979.

.2506 REQUIREMENTS FOR AN EXEMPTION

The secretary may exempt any public water system in the state from any requirement respecting a maximum contaminant level or any treatment technique requirement, or from both, of an applicable rule of 10 NCAC 10D .1610 through .1634 upon a finding that:

(1) Due to compelling factors (which may include economic factors), the public water system is unable to comply with such contaminant level or treatment technique requirement;
(2) The public water system was in operation on the effective date of federal promulgation of such contaminant level or treatment technique requirement; and
(3) The granting of the exemption will not result in an unreasonable risk to health.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; 40 C.F.R. 142;
Eff. September 1, 1979;
Amended Eff. December 19, 1979.

.2507 EXEMPTION REQUEST

A supplier of water may request an exemption for a public water system by submitting a written request to the secretary. Suppliers of water may submit a joint request for exemptions when they seek similar exemptions under similar circumstances. Any request for an exemption or exemptions shall include the following information:

(1) the nature and duration of exemption requested;
(2) relevant analytical results of water quality sampling of the system, including results of relevant tests conducted pursuant to the requirements of the drinking water regulations;
(3) explanation of the compelling factors such as time or economic factors which prevent such system from achieving compliance;
(4) other information if any, believed by the applicant to be pertinent to the application;
(5) a proposed compliance schedule, including the date when each step toward compliance will be achieved;
(6) such other information as the secretary may require.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; 40 C.F.R. 142;
Eff. September 1, 1979.

.2508 CONSIDERATION OF AN EXEMPTION REQUEST

(a) The secretary shall act on any exemption request submitted pursuant to .2507 of this Section within 90 days of receipt of the

request.

(b) In consideration of whether the public water system is unable to comply due to compelling factors, the secretary shall consider such factors as the following:

(1) construction, installation, or modification of treatment equipment or systems;

(2) the time needed to put into operation a new treatment facility to replace an existing system which is not in compliance;

(3) economic feasibility of compliance.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; C.F.R. 142;
Eff. September 1, 1979.

.2509 DISPOSITION OF AN EXEMPTION REQUEST

(a) If the secretary decides to deny the application for an exemption, the applicant shall be notified of the intention to issue a denial. Such notice shall include a statement of reasons for the proposed denial. Within 30 days after the receipt of such notice, the applicant may request a hearing for the purpose of contesting the proposed denial. Such hearing shall be conducted in the manner set forth in G.S. 150A-23 through 150A-52. If no hearing is requested by the applicant within the 30 day period, the application shall be denied.

(b) If the secretary grants an exemption request submitted pursuant to .2507 of this Section, the applicant shall be notified of the decision in writing. Such notice shall identify the facility covered and shall specify the termination date of the exemption. Such notice shall provide that the exemption will be terminated when the system comes into compliance with the applicable rule, and may be terminated upon a finding by the secretary that the system has failed to comply with any requirements of a final schedule issued pursuant to .2511 of this Section.

(c) The secretary shall propose a schedule for:

(1) compliance (including increments of progress) by the public water system with each contaminant level requirement and treatment technique requirement covered by the exemption, and

(2) implementation by the public water system of such control measures as the secretary may require for each contaminant covered by the exemption.

(d) The schedule shall be prescribed by the secretary within one year after the granting of the exemption, subsequent to provision of opportunity for hearing pursuant to .2510 of this Section.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; 40 C.F.R. 142;
Eff. September 1, 1979.

.2510 PUBLIC HEARINGS ON EXEMPTION SCHEDULES

(a) Before a schedule proposed by the secretary pursuant to

.2509 of this Section may take effect, the secretary shall provide notice and opportunity for public hearing on the schedule. Such notice may cover the proposal of more than one such schedule and a hearing held pursuant to such notice shall include each of the schedules covered by the notice.

(b) Public notice of an opportunity for hearing on an exemption schedule shall be circulated in a manner designed to inform interested and potentially interested persons of the proposed schedule, and shall include at least the following:

(1) Posting of a notice in the principal post office of each municipality or area served by the public water system, and publishing a notice in the newspaper or newspapers of general circulation in the area served by the public water system;

(2) Mailing of a notice to the water supply branch, division of health services and to other appropriate state or local agencies at the secretary's discretion;

(3) Such notices shall include a summary of the proposed schedule and shall inform interested persons that they may request a public hearing on the proposed schedule.

(c) Requests for hearing may be submitted by any interested person. Frivolous or insubstantial requests for hearing may be denied by the secretary. Requests must be submitted to the secretary within 30 days after issuance of the public notices provided for in (b) of this Rule. Such requests shall include the following information:

(1) the name, address and telephone number of the individual, organization or other entity requesting a hearing;

(2) a brief statement of the interest of the person making the request in the proposed schedule and of information that the requesting person intends to submit at such hearing; and

(3) the signature of the individual making the request, or, if the request is made on behalf of an organization or other entity, the signature of a responsible official of the organization or other entity.

(d) Any hearing held pursuant to a request submitted by an interested person or on the secretary's own motion shall be conducted in the manner set forth in G.S. 150A-23 through 150A-52.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; 40 C.F.R. 142;
Eff. September 1, 1979.

.2511 FINAL SCHEDULE

(a) Within a reasonable time after the termination of a hearing conducted in the manner set forth in G.S. 150A-23 through 150A-52, the secretary shall, based upon consideration of the hearing record as a whole, revise the proposed schedule as necessary and prescribe the final schedule for compliance and interim measures for the public water system granted an exemption under .2509 of

this Section.

(b) Such schedule shall require compliance by the public water system with each contaminant level and treatment technique requirement prescribed by:

(1) regulations in 10 NCAC 10D .1610 through .1634 adopted on or before September 1, 1979, by no later than January 1, 1981; and

(2) amendments to 10 NCAC 10D .1610 through .1634 adopted after September 1, 1979, by no later than seven years after the effective date of the revised National Primary Drinking Water Regulations.

(c) If the public water system has entered into an enforceable agreement to become a part of a regional public water system, as determined by the secretary, such schedule shall require compliance by the public water system with each contaminant level and treatment technique requirement prescribed by:

(1) regulations in 10 NCAC 10D .1610 through .1634 adopted on or before September 1, 1979, by no later than January 1, 1983; and

(2) amendments to 10 NCAC 10D .1610 through .1634 adopted after September 1, 1979, by no later than nine years after the effective date of the revised National Primary Drinking Water Regulations.

History Note: Authority G.S. 130A-315; 130A-321;
P.L. 93-523; 40 C.F.R. 142;
Eff. September 1, 1979;
Amended Eff. December 19, 1979.

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SECTION .2600 - LOCAL PLAN APPROVAL PROGRAM

.2601 LOCAL APPROVAL PROGRAM

This section implements G.S. 130A-317(d) which authorizes the certification of local programs for approval of the construction or alteration of the distribution system of a community water system. For purposes of this section, distribution system means the network of pipes, valves, hydrants and related appartenances but does not include pumps, storage tanks, treatment devices, wells or other facilities.

History Note: Statutory Authority G.S. 130A-317;
1985 S.L., Ch. 697, Sec. 3;
Eff. January 1, 1986.

.2602 APPLICATION FOR CERTIFICATION

Application for certification shall be made to the Environmental Health Section, Division of Health Services, P.O. Box 2091, Raleigh, North Carolina, 27602. Application shall be submitted in triplicate and shall designate the office or agency which will administer the program.

History Note: Statutory Authority G.S. 130A-317;
1985 S.L., Ch. 697, Sec. 3;
Eff. January 1, 1986.

.2603 CERTIFICATION

The Department shall certify a local approval program which satisfies the requirements of G.S. 130A-317(d). The requirements of G.S. 130A-317(d)(4) are satisfied when a local approval program provides by ordinance or local law for enforcement provisions equivalent to G.S. 130A-18 and G.S. 130A-25. The requirements of G.S. 130A-317 (d)(5) are satisfied when a local approval program has a minimum staff and other resources of: a designer who is a professional engineer registered in this State and who will devote full time to local approval program duties; a technical staff, budget, equipment and facilities sufficient to support a design engineering office; and an organizational structure sufficient to carry out this purpose.

History Note: Statutory Authority G.S. 130A-317;
1985 S.L., Ch. 697, Sec. 3;
Eff. January 1, 1986.

.2604 NOTICE

(a) A local approval program shall submit notice to the Department of each approval of the construction or alternation of the distribution system of a community water system. The notice shall consist of one copy of the application with construction plans, any revisions made to the plans and the final approval letter.

(b) The local approval program shall provide notice to the Department within 10 days of any change in staff, budget or other resources which may affect the ability to effectively carry out

the plan review program.

History Note: Statutory Authority G.S. 130A-317;
1985 S.L., Ch. 697, Sec. 3;
Eff. January 1, 1986.

.2605 DEPARTMENTAL ENFORCEMENT

If the Department determines that a community water system is violating local approval requirements and the local approval program has not enforced its requirements, the Department may, after written notice, to the local program, enforce the requirements in accordance with provisions of G.S. 130A-17 through 130A-28.

History Note: Statutory Authority G.S. 130A-317;
1985 S.L., Ch. 697, Sec. 3;
Eff. January 1, 1986.

DOC NO: CLEJ - 005
12.03 - 01/24/8

APPENDIX

FIGURE 1 (a) ALKALINITY VS pH *

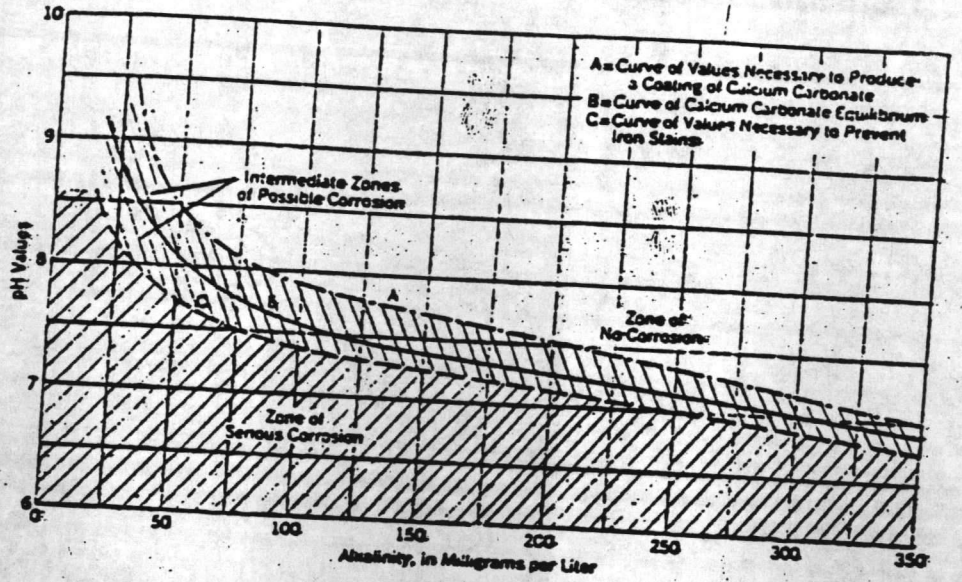
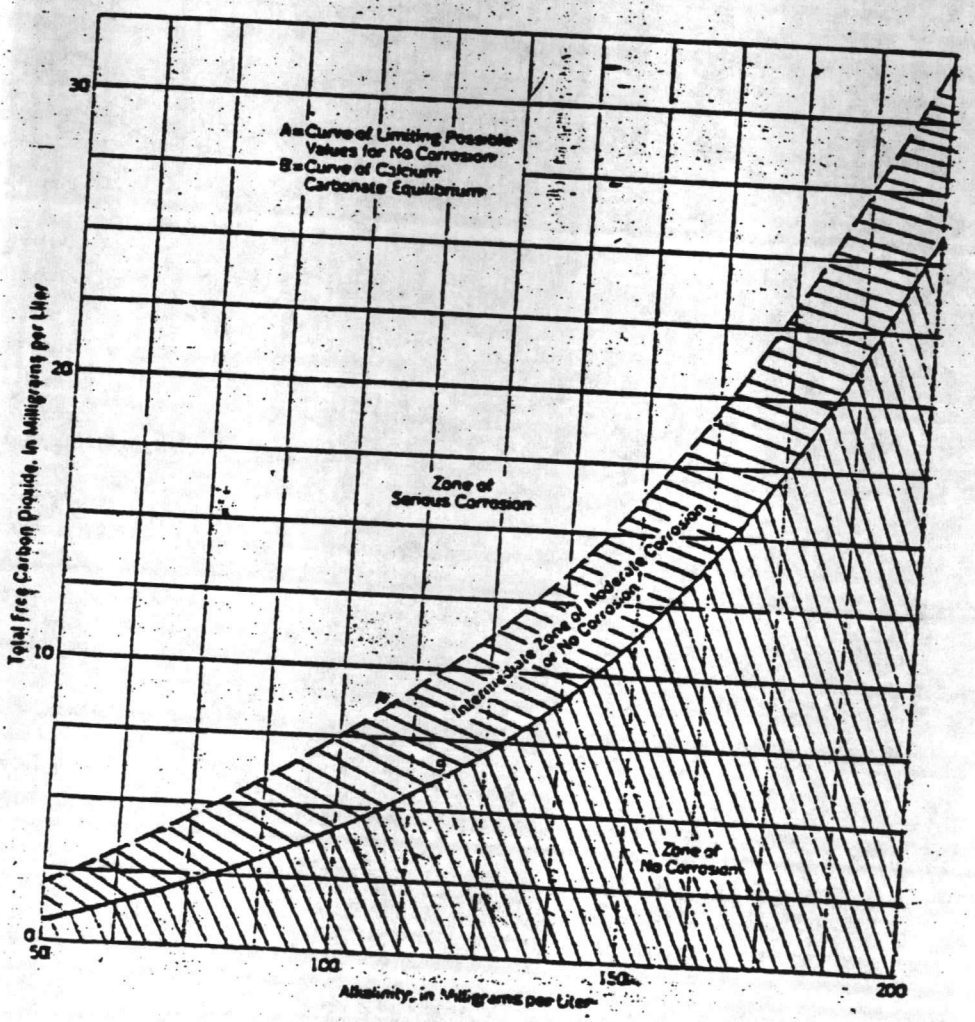


FIGURE 1 (b) ALKALINITY VS TOTAL FREE CARBON DIOXIDE *



* WATER SUPPLY AND WASTE DISPOSAL. Hardenbergh, W.A., and Rodie, E.B., International Textbook Co., Scranton, Pa. 1961.

FIGURE 2

INSTANTANEOUS DEMAND FOR RESIDENTIAL COMMUNITY WATER SYSTEMS

(Number of Connections vs Gallons Per Minute)

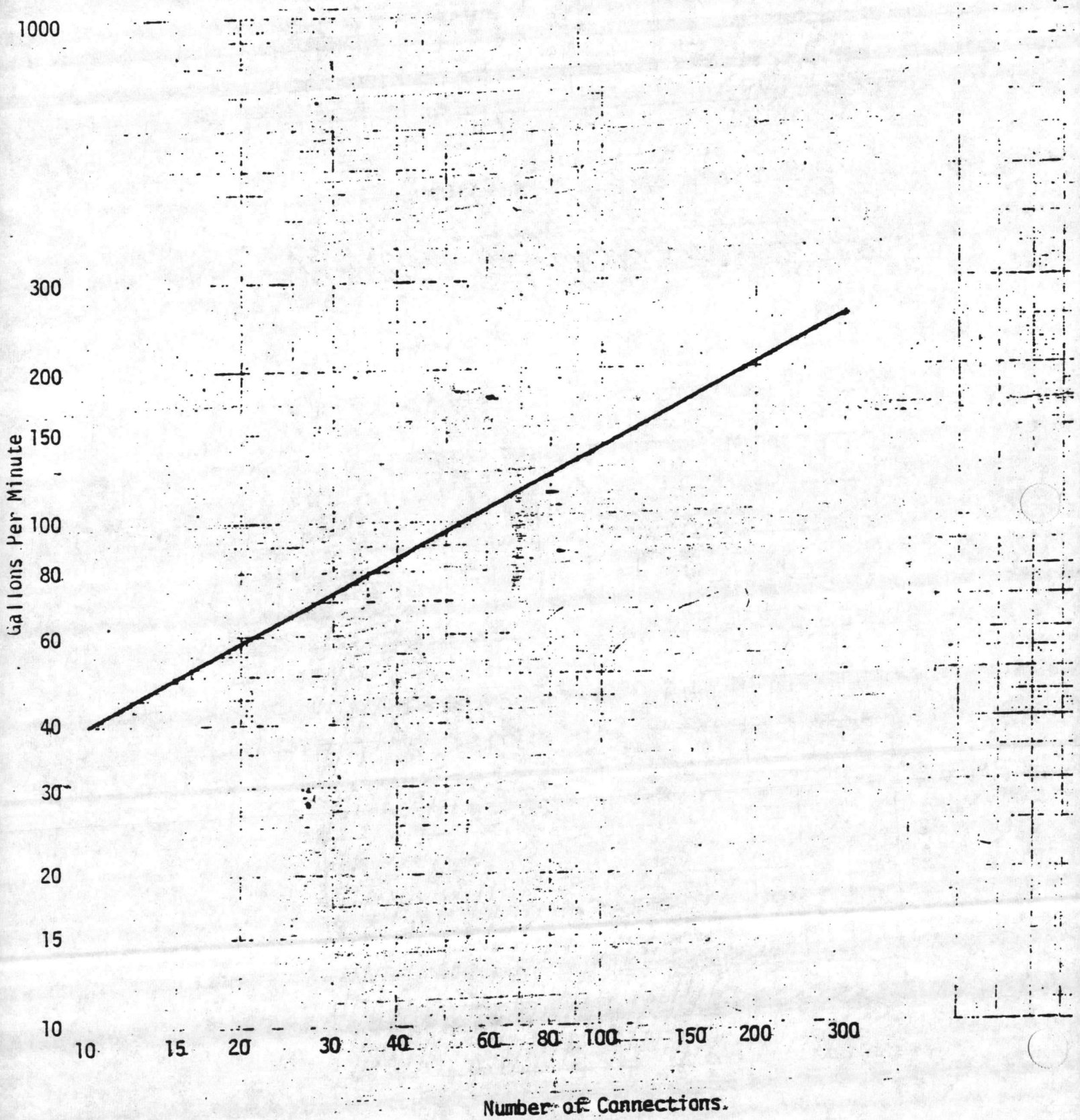


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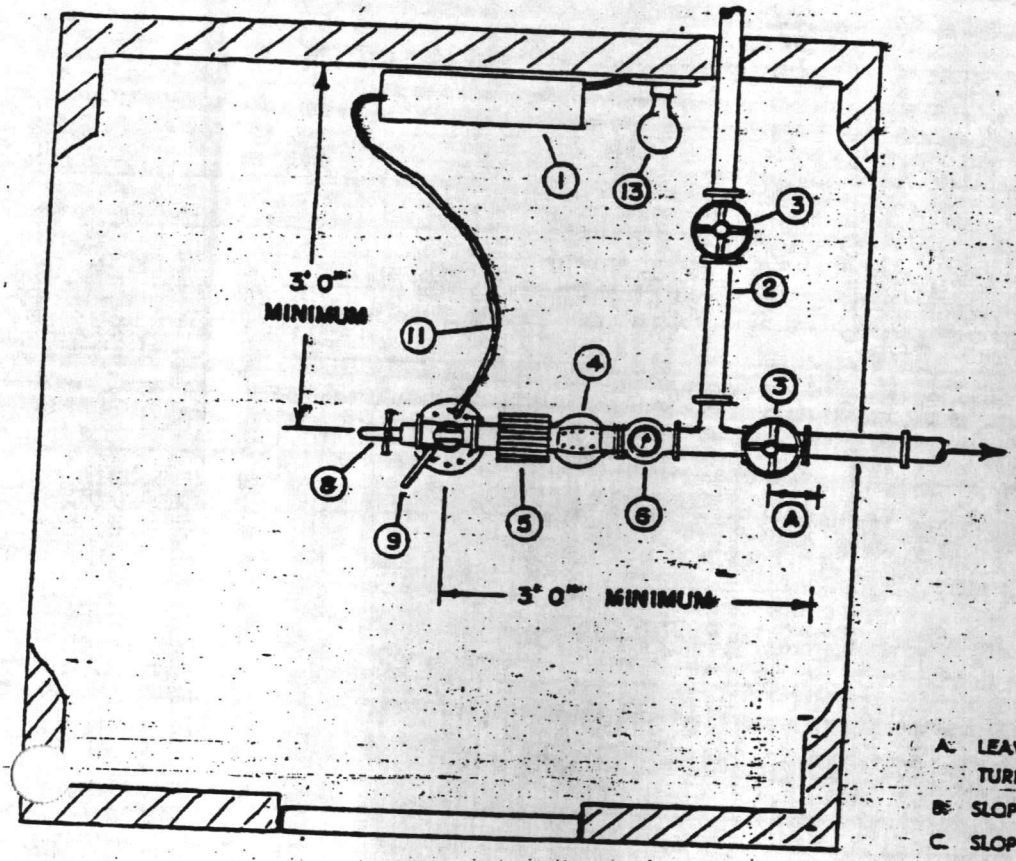
FIGURE 3

TYPICAL WELL HEAD DETAILS

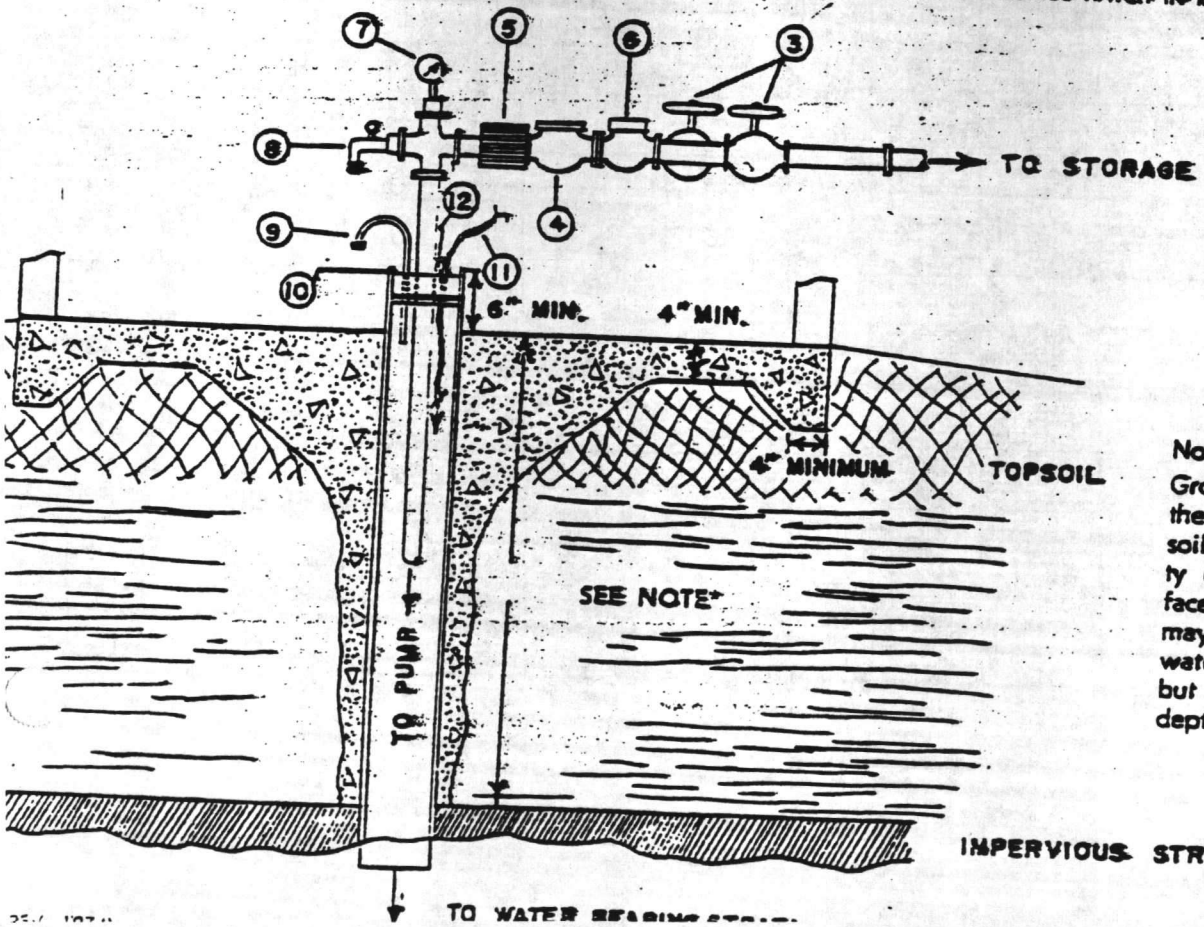


LEGEND

1. CONTROL BOX
2. BLOW OFF LINE
3. GATE VALVE
4. CHECK VALVE
5. DRESSER COUPLING (OR UNION)
6. METER
7. PRESSURE GUAGE (W/NEEDLE VALVE)
8. SAMPLE FAUCET (W/THREADED HOSE RIB)
9. SCREENED VENT
10. SANITARY WELL SEAL
11. ELECTRICAL CONDUIT
12. ELECTRICAL CABLE SEAL
13. ELECTRICAL LIGHTING

NOTES

A. LEAVE CLEARANCE BETWEEN WALL AND VALVE FOR TURNING VALVE
B. SLOPE GROUND SURFACE AWAY FROM SLAB
C. SLOPE FLOOR TO DRAIN
D. PROVIDE HATCH IN ROOF ABOVE WELL CASING



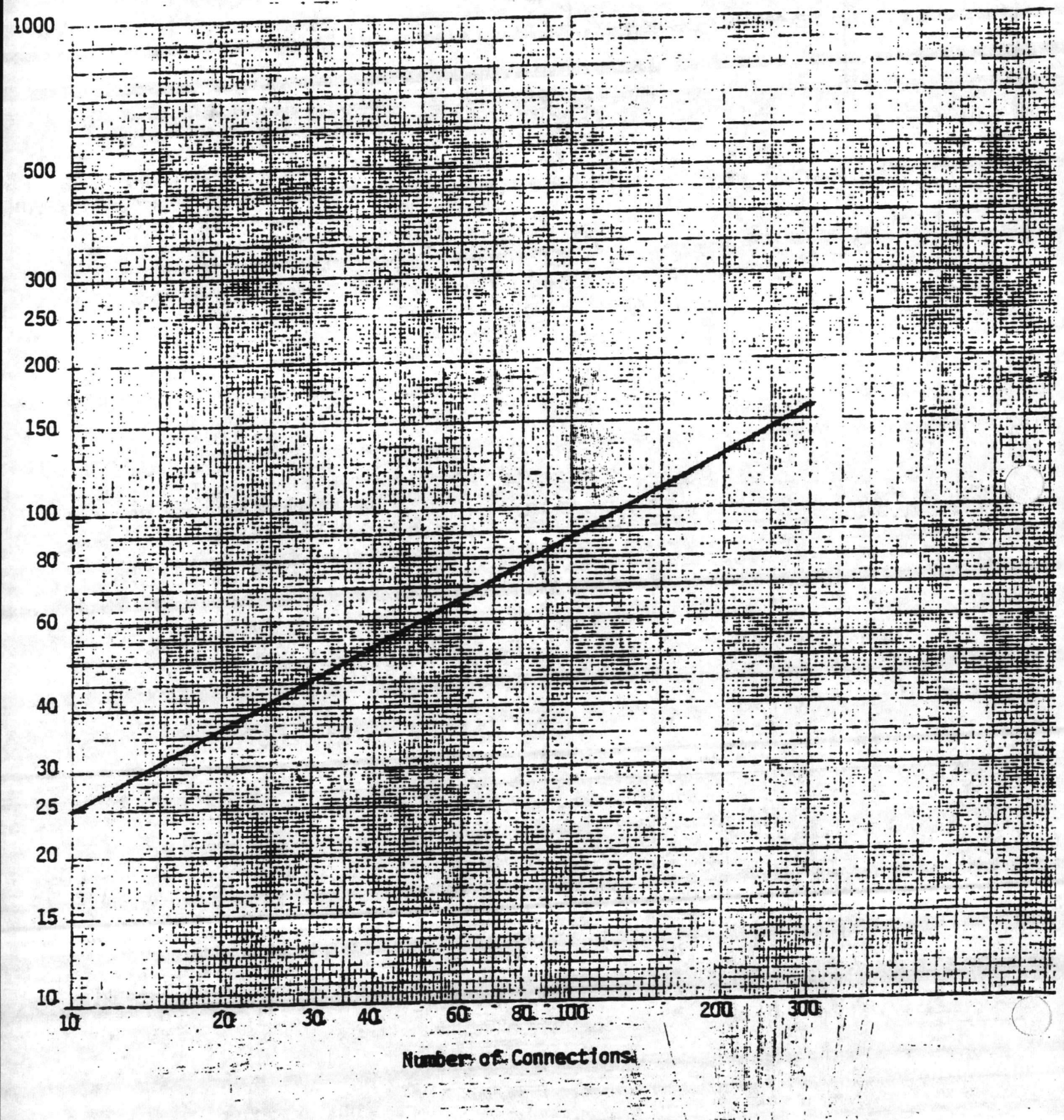
Note*

Grout the annular space between the casing and the surrounding soil to a distance of at least twenty (20) feet below ground surface, provided that this distance may be reduced when available water is found at a lesser depth, but in no case shall the grouting depth be less than ten (10) feet.

FIGURE 4

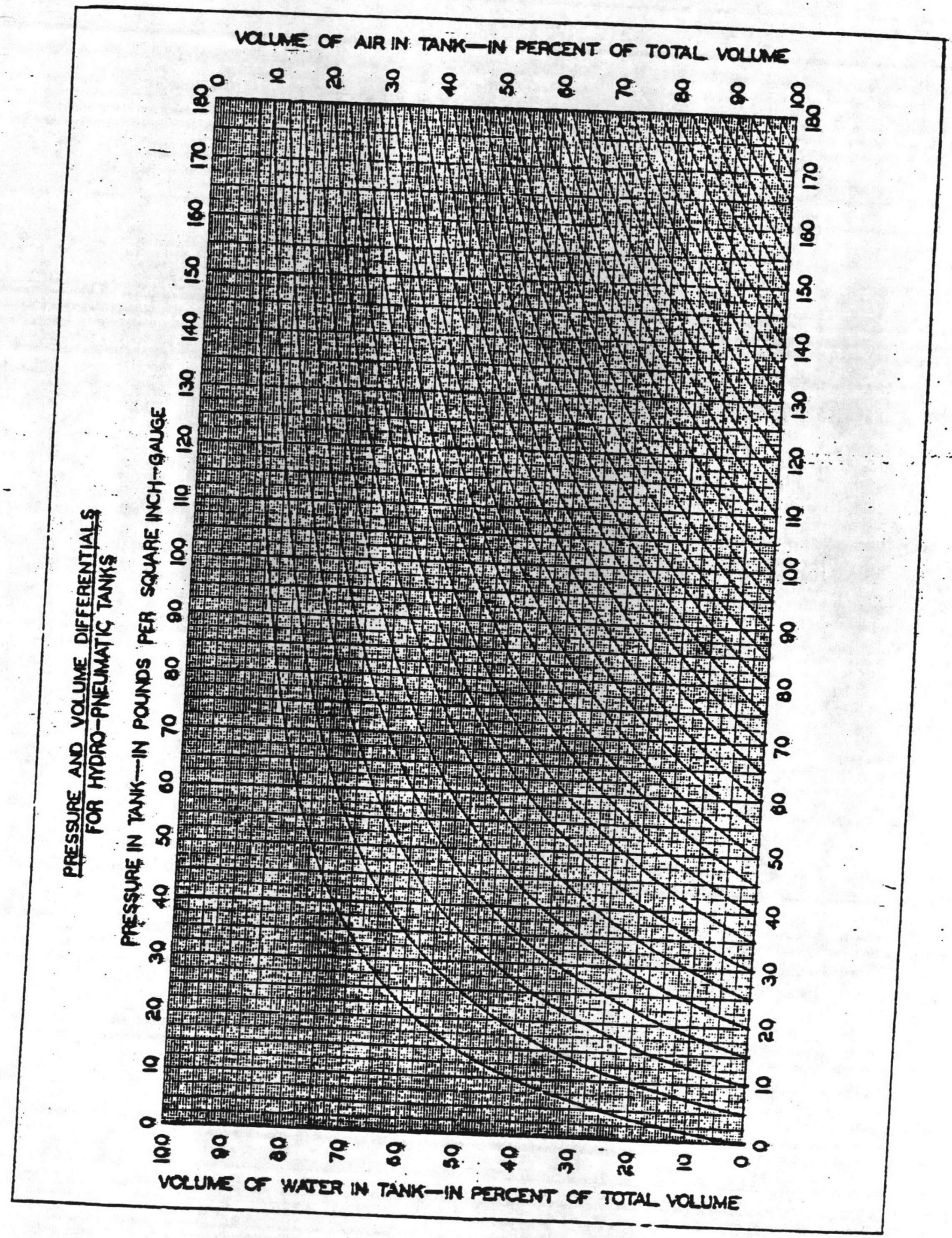
PEAK DEMAND FOR MOBILE HOME PARK WATER SYSTEMS

(Number of Connections vs Gallons Per Minute)



Doc No: CLEJ-00561-12.03-01/26/8

FIGURE 5



DOC NO: CEJ-00561-12.
01/26/87

VOLUME OF HYDROPNEUMATIC TANKS

The following examples are offered in further explanation of the requirements for proper sizing of hydropneumatic tanks. As previously indicated, it is required to supply the indicated peak demand for a period of twenty minutes, and it is assumed that a combination of hydropneumatic storage and pumping will be utilized. The Effective Volume of the tank is considered to be the volume of water discharged between the high and low pressure setting.

Required Effective Volume = (Peak Demand — Pumping Capacity) x 20 Minutes

For example, a mobile home system to serve 50 spaces and having a pumping capacity of 30 gpm would require an effective volume of:

Req'd. Eff. Vol. = (Peak Demand — Pump. Cap.) x 20 Min.
= (60 — 30) x 20 (See Figure 4)
= 600 gallons

The actual tank size required to furnish the 600 gallons effective volume depends upon the pressure settings, air-water volume controls, etc. A system without controls would require the largest tank, whereas a system with air charging device and automatic air-water volume controls would require a much smaller tank.

The curves indicating air-water volume relationships shown in Figure 5 may be utilized to determine required tank sizes.

Continuing the above example, assume further that it is necessary to operate the tank on a 60-40 psi pressure cycle, and assume that the tank has no air-water volume controls and was not pre-charged. These conditions are indicated by the top curve in Figure 5 since this curve passes through the zero % water - 100% air point.

At 60 psi, water volume ____ 80%
At 40 psi, water volume ____ 73%

Therefore, the percent water volume discharged during the 60-40 psi cycle is 80 — 73 = 7% of the total tank volume. The total volume of a tank necessary to produce the required effective volume of 600 gallons:

$$\text{Total Volume} = \frac{600}{0.07} = 8570 \text{ gallons}$$

The tank size can also be determined by direct calculation rather than by using Figure 5. By using the principle of Boyle's Law and assuming the effects of temperature to be negligible, the tank is sized accordingly.

Continuing the above example and converting the pressures to Absolute (gauge + 14.7 psi), the volume is calculated as follows:

If there is no water (100% air) in the tank originally and it is filled with water until a pressure of 60 psi gauge is reached, the volume of air at that point is:

$P_1V_1 = P_2V_2$

$$\text{Vol.}_2 = \frac{P_1V_1}{P_2} = \frac{(0 + 14.7 \text{ psi}) \times (100)}{(60 + 14.7 \text{ psi})} = 19.7\% \text{ (air)}$$

On a 60-40 psi cycle, the tank would discharge to a pressure of 40 psi, and the air volume would be:

$$\text{Vol.}_3 = \frac{P_2V_2}{P_3} = \frac{(60 + 14.7 \text{ psi}) \times (19.7\%)}{(40 + 14.7 \text{ psi})} = 26.9\% \text{ (air)}$$

The percent volume of water discharged during the 60-40 cycle is:

Percent volume = 26.9 — 19.7 = 7.2%

The total tank volume necessary to produce the required effective volume of 600 gallons is:

$$\text{Tank Volume} = \frac{600 \text{ gal.}}{0.072} = 8330 \text{ gallons}$$

By utilizing an air charging system with automatic air-water volume controls, it is possible to discharge up to 25% of the tank volume during a 60-40 psi pressure cycle. The total tank volume necessary to furnish the required effective volume in this case would be:

$$\text{Total Tank Volume} = \frac{\text{Required Effective Volume (gallons)}}{0.25}$$

APPROVED METHODOLOGY FOR MICROBIOLOGICAL CONTAMINANTS

TABLE 1

Contaminant	Methodology	Reference (Method Numbers)		
		EPA[1]	SM[2]	Other
Coliforms	Multiple Tube Technique	pp. 114-119	908A & 908D	-
	Membrane Filter Technique	pp. 108-114	909A	-

[1] "Microbiological Methods for Monitoring the Environment, Water and Waste", EPA 600/8-78-017, U.S. EPA, EMSL, Cincinnati, Ohio 45268.

[2] "Standard Methods for the Examination of Water and Wastewater", 14th Edition, American Public Health Association, American Water Works Association, Water Pollution Control Federation, 1975.

*Addendum to Table 2.

Contaminant	Methodology	EPA[1]	SM[3]
Iron	Atomic absorption; direct aspiration	236.1	301A-II
	Atomic absorption; furnace technique	236.2	-
Manganese	Atomic absorption; direct aspiration	243.1	301A-II
	Atomic absorption; furnace technique	243.2	-

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12.03-01/24

TABLE 2

Contaminant	Methodology	EPA	ASTM[2]	SM[3]	Other
Alkalinity	Methyl orange titrimetric or Potentiometric	310	D1067-70B	403	-
Arsenic	Atomic absorption; furnace technique	206.2	-	-	-
	Atomic absorption; gaseous hydride	206.3	D2972-78B	301A-VII	I-1062-78[4]
	Spectrophotometric, silver diethyldithiocarbamate	206.4	D2972-78A	404A & 404B(4a)	-
Barium	Atomic absorption; direct aspiration	208.1	-	301A-IV	-
	Atomic absorption; furnace technique	208.2	-	-	-
Cadmium	Atomic absorption; direct aspiration	213.1	D3557-78A or B	301A-II or III	-
	Atomic absorption; furnace technique	213.2	-	-	-
Calcium Hardness	EDTA titrimetric	-	D1126-67	306C	-
	Atomic absorption; direct aspiration	215.1	-	301A-II & 309	-
Chloride	Potentiometric	-	-	408C	-
Chromium	Atomic absorption; direct aspiration	218.1	D1687-77D	301A-II or III	-
	Atomic absorption; furnace technique	218.2	-	-	-
Corrosivity	Langelier index	-	-	203	-
	Aggressive index	-	-	-	C400-77[5]
Fluoride	Colorimetric SPADNS; with distillation	340.1	D1179-72A	414 A and C	-
	Potentiometric ion selective electrode	340.2	D1179-72B	414B	-
	Automated Alizarin fluoride blue; with distillation	-	-	603	129-71W[6]
	Automated ion selective electrode	-	-	-	380-75WE[7]
	Zirconium eriochrome cyanine R; with distillation	-	-	-	I-3325-78
Free chlorine residual	Colorimetric DPD	-	-	409F	-
Lead	Atomic absorption; direct aspiration	239.1	D3559-78A or B	301A-II or III	-
	Atomic absorption; furnace technique	239.2	-	-	-
Mercury	Manual cold vapor technique	245.1	D3223-79	301A-VI	-
	Automated cold vapor technique	245.2	-	-	-
Nitrate	Colorimetric brucine	352.1	D992-71	419D	-
	Spectrometric; cadmium reduction	353.3	D3867-79B	419C	-
	Automated hydrazine reduction	353.1	-	-	-
	Automated cadmium reduction	353.2	D3867-79A	605	-
	Potentiometric, Ion Selective Electrode	-	-	-	Orion Rep. Inc.

TABLE 2

APPROVED METHODOLOGY FOR INORGANIC CONTAMINANTS

Contaminant	Methodology	Reference (Method Number)			
		EPA[1]	ASTM[2]	SM[3]	Other
pH	Potentiometric	150.1	D1293-78A or B	424	-
Selenium	Atomic absorption; furnace technique	270.2	-	-	-
	Atomic absorption; gaseous hydride	270.3	D3859-79	301A-VII	I-1667-78[4]
Silver	Atomic absorption; direct aspiration	272.1	-	301A-II	-
	Atomic absorption; furnace technique	272.2	-	-	-
Sodium	Atomic absorption; direct aspiration	273.1	D1428-64A	320A	-
	Atomic absorption; furnace technique	273.2	-	-	-
Sulfate	Turbidimetric	375.4	-	427C	-
Temperature	Thermometer	-	-	212	-
Total filterable residue	Gravimetric	160.1	-	208B	-
Turbidity	Nephelometric	180.1	-	214A	-

[1]"Methods of Chemical Analysis of Water and Wastes," EPA Environmental Monitoring and Support Laboratory, Cincinnati, Ohio 45268 (EPA-600/4-79-020), March 1979. Available from ORD Publications, CERI, EPA, Cincinnati, Ohio 45268. For approved analytical procedures for metals, the technique applicable to total metals must be used.

[2]Annual Book of ASTM Standards, Part 31 Water, American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19103.

[3]"Standard Methods for the Examination of Water and Wastewater," 14th Edition, American Public Health Association, American Water Works Association, Water Pollution Control Federation, 1975.

[4]Techniques of Water-Resources Investigation of the United States Geological Survey, Chapter A-1, "Methods for Determination of Inorganic Substances in Water and Fluvial Sediments," Book 5 (1979, Stock #024-001-03177-9. Available from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402.

[5]"AWWA Standard for Asbestos - Cement Pipe, 4 in. through 24 in. for Water and Other Liquids," AWWA C400-77, Revision of C400-75, AWWA, Denver, Colorado.

[6]"Fluoride in Water and Wastewater. Industrial Method #129-71 W." Technicon Industrial Systems, Tarrytown, New York 10591, December 1972.

[7]"Fluoride in Water and Wastewater," Technicon Industrial Systems, Tarrytown, New York 10591, February 1976.

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12.07- 01/26

chromatography

Solvent extraction, gas chromatography

Gas chromatography/mass spectrometry 3

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[1]"The Analysis of Trihalomethanes in Finished Waters by the Purge and Trap Method," Method 501.1, EMSL, EPA, Cincinnati, Ohio 45268.

[2]"The Analysis of Trihalomethanes in Drinking Water by Liquid/Liquid Extraction," Method 501.2, EMSL, EPA, Cincinnati, Ohio 45268.

Section: CLEJ - 00564 - 12.03 - 08/27/87
1142

State of North Carolina
Department of Natural Resources and Community Development
Division of Environmental Management
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

R. Paul Wilms
Director

August 27, 1987

Mr. J.R. Bailey, P.E.
Head, Environmental Quality Branch
Utilities, Energy and Environmental Division
Naval Facilities Engineering Command
Norfolk, Virginia 23511-6287

Dear Mr. Bailey:

In response to your letter of 15 June 1987, reference number 6280, 1142 CFB, the Groundwater Section staff has reviewed the incident file and your summary information concerning groundwater contamination in the Hadnot Point area of Camp Lejeune.

In setting the target concentrations for remedial actions, the maximum allowable contaminant levels established under the provisions of the groundwater quality standards, North Carolina Administrative Code 15 NCAC 2L, a copy of which is enclosed, are the guide. The compounds listed in your letter have maximum allowable contaminant levels of zero, see 15 NCAC 2L.0202(b), page 2L-11. Inasmuch as a "zero" target concentration would be undetectable, remediation goals have been set using the process which is outlined in the proposed revisions to 15 NCAC 2L.

Under the aforementioned process, maximum contaminant concentrations for the compounds listed in your letter, which exist singularly, would be established as the lesser of either a health advisory based on the NOAEL or LOAEL or a concentration which corresponds to an incremental lifetime cancer risk of 1×10^{-6}. Where two or more substances exist in combination, the Director of DEM shall consider the effects of chemical interactions and may establish standards at values less than those specified in the proposed regulations. In incidents involving two or more carcinogens, the risk will be considered to be additive unless information to the contrary is available. Where the maximum contaminant concentration of a substance is less than the limit of detectability, the substance shall not be permitted in detectable concentrations. The detectability is based on the analytical methods prescribed in the proposed groundwater quality standards, primarily in E.P.A. publication

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SW-846 and the Federal Register Vol. 49, No. 209, 40 CFR Part 136, October 26, 1984.

For the compounds given in your letter, the maximum contaminant concentrations for each occurring singularly are as follows:

Compound	Maximum Contaminant Concentration	Analysis	Basis
Trichloroethene	2.8 ppb	EPA 601	10^{-6} cancer risk
1,2-dichloroethane	0.95 ppb	EPA 601	10^{-6} cancer risk
1,1-dichloroethene	0.24 ppb	EPA 601	10^{-6} cancer risk
trans-1,2-dichloroethene	70.0 ppb	EPA 601	Health Advisory
tetrachloroethene	0.7 ppb	EPA 601	10^{-6} cancer risk
vinyl chloride	0.18 ppb*	EPA 601	Published Detection Limit
benzene	0.7 ppb	EPA 602	10^{-6} cancer risk

* Maximum contaminant concentration for vinyl chloride is given as the detection limit published in EPA Method 601; however, the 10^{-6} cancer risk is 0.015 ppb which shall be used in determining the 10^{-6} cancer risk associated with the combination of compounds given in Department of the Navy correspondence.

Where it can be demonstrated by a responsible party that is not technologically or economically feasible to restore groundwater quality to level of the standards or to proposed target concentrations for remediation, then the responsible party may submit a proposal for alternate contaminant concentrations. The proposal must address 1) the groundwater contaminant migration, 2) current and predictable used of groundwater potentially impacted by contaminants, 3) health and environmental effects associated with exposure to the groundwater contaminants, 4) technological constraints which limit restoration to the level of the proposed alternate contaminant concentrations for incidents where restoration is thought not to be technologically feasible, and 5) the incremental cost of restoration compared to the value of the reclaimed resource for incidents where restoration is thought not to be economically feasible.

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Should you have any questions concerning the standards, the process or restoration levels, please contact either Bill Jeter or Douglass Dixon at this letter head address or telephone (919) 733-3221 at your convenience.

Sincerely,

R. Paul Wilms

Enclosure

cc: Perry F. Nelson
Bill Meyer
Lee Laymon
Bill Jeter
Douglass Dixon
Files

PFN/WCJ/tej

UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542-5001

IN REPLY REFER TO
6280/9
FAC
JUN 22 1988

From: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina 28542-5001
To: Commander, Atlantic Division, Naval Facilities Engineering Command, Norfolk, Virginia 23511-6287 (Code 114)

Subj: PROPOSED STATE OF NORTH CAROLINA GROUNDWATER STANDARDS

Encl: (1) Excerpt from the NC Register, date 15 Jun 88: pages 241-254; NCNRDC Proposed Regulations on Groundwater Classification and Standards

1. Request your review of the enclosure in relation to compliance with these standards by the Installation Restoration Program. We are particularly interested in your evaluation of the water quality standards presented in Section .0202 for the organic compounds being addressed at the Hadnot Point Industrial Area. Please advise of any compliance problems which you foresee in meeting these standards.

2. POC for this matter is Bob Alexander, autovon 484-3034.

K. J. KIRIACOPOULOS
By direction

Copy to:
ESE, Inc.

DOC NO. CCW-00614 12.03-6/22/88

statements for the most recent fiscal year shall satisfy this requirement unless the department determines that additional or more recent financial information is required.

Statutory Authority G.S. 58-9; 58-536.

.0302 DETERMINATION OF FINANCIAL RESPONSIBILITY

In determining the financial responsibility of an applicant for a certificate of registration, the department requires that an applicant be solvent. In addition, the department will consider, among other things:

(1) liquidity, and

(2) any internal controls the applicant may have in place to afford protection for benefit plans, which may include, but are not limited to, the manner in which benefit plan fund accounts are established.

Statutory Authority G.S. 58-9; 58-532; 58-536.

.0303 FINANCIAL INFORMATION PUBLIC RECORDS

All financial information filed in support of an application for initial issuance or renewal of a certificate of registration will be subject to the public records law of North Carolina. Such information will not be released by the department until registration is accomplished and a certificate issued. In the event that the application is withdrawn from consideration by the applicant, then it will not be deemed public information.

Statutory Authority G.S. 58-9; 58-11; 132-6.

.0304 FIDELITY BOND ISSUED BY LICENSED COMPANY

The fidelity bond required by G.S. 58-536(b) must be issued by an insurance company licensed or authorized to do business in North Carolina. Such bond must be issued in the name of the third party administrator and provide for notification to the Department of Insurance 30 days in advance of any termination, or increase or decrease in the amount thereof. A copy of the policy is required to be filed with the department.

Statutory Authority G.S. 58-9; 58-15; 58-29; 58-536.

SECTION .0400 - GENERAL PROVISIONS

.0401 SERVICE CONTRACTS WITH INSURANCE COMPANIES

All service contracts with insurance companies must be with insurers licensed or authorized to operate in North Carolina.

Statutory Authority G.S. 58-9; 58-15; 58-527.

.0402 ADJUSTING CLAIMS BY THIRD PARTY ADMINISTRATORS

No adjuster's license will be required of persons acting for third party administrators in adjusting claims for life, accident and health and annuity claims or self-funded health benefit plans.

Statutory Authority G.S. 58-9; 58-529; 58-533; 58-611(b).

.0403 VIOLATIONS: PENALTIES

The department shall follow the provisions of G.S. 58-9.7 for the imposition of civil penalties against any third party administrator that does not obtain a certificate of registration prior to beginning its operations in this state in accordance with Article 41 of the North Carolina General Statutes.

Statutory Authority G.S. 58-9; 58-9.7; 58-536.

TITLE 15 - DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT

Notice is hereby given in accordance with G.S. 150B-12 that the Department of Natural Resources and Community Development intends to adopt regulations cited as 15 NCAC 2L .0106 - .0114; amend regulations cited as 2L .0101 - .0104, .0201 - .0202, .0301 - .0302, and .0319; and repeal regulation cited as 2L .0105.

The proposed effective date of this action is January 1, 1989.

The public hearing will be conducted at 7:00 p.m. at:

ASHEVILLE
July 26, 1988
Humanities Lecture Hall
UNC-Asheville

RALEIGH
July 28, 1988
Ground Floor Hearing Room
Archdale Building
512 N. Salisbury St.

NEW BERN
August 2, 1988
Building C, Room C-15
Craven County Community College

Comment Procedures: Oral comments may be made at a hearing, or written statements may be submitted to the agency prior to September 1, 1988. Written copies of oral statements exceeding three minutes are requested. Oral statements may be limited at the discretion of the hearing officers.

CHAPTER 2 - ENVIRONMENTAL MANAGEMENT

SUBCHAPTER 2L - GROUNDWATER CLASSIFICATION AND STANDARDS

SECTION .0100 - GENERAL CONSIDERATIONS

.0101 AUTHORIZATION

~~(a)~~ N.C. General Statute 143-214.1 directs that the Commission develop and adopt after proper study a series of classifications and standards which will be appropriate for the purpose of classifying each of the waters of the state in such a way as to promote the policy and purposes of the act. Pursuant to this statute, the ~~Regulations of~~ rules in this Subchapter establish a series of classifications and water quality standards applicable to the ~~underground waters~~ groundwaters of the state.

~~(b) These Regulations and the standards they establish apply to all classified underground waters. Many common activities take place in or near shallow subsurface waters with no resulting violation of GA groundwater quality standards and it is the intention of these Regulations that these activities continue unimpeded except where specific problems are identified on a case by case basis. These activities include:~~

~~(1) the agricultural operations of applying fertilizer, herbicides, or pesticides to croplands or pastures, and the raising of livestock;~~

~~(2) silvicultural fertilizer, herbicide or pesticide application; home or commercial fertilizer, pesticide, or herbicide application;~~

~~(3) structural pest control activities when conducted according to label directions; and~~

~~(4) subsurface or surface municipal, industrial, and domestic waste disposal activities or other activities which may affect underground waters when these systems are installed and operated or conducted according to regulations established by the Departments of Human Resources, Agriculture, or Natural Resources and Community Development.~~

~~(c) As used herein, the phrase "specific problems" shall mean a set of facts or circumstances which show with a reasonable certainty that one or more of the following exists or will exist in the foreseeable future:~~

~~(1) An existing or probable violation of GA groundwater standards;~~

~~(2) The existence or probability of a violation of any other environmental standard or regulation;~~

~~(3) A threat to human life, health, or safety;~~

~~(4) A threat to the environment.~~

~~(d) The regulations established in this Subchapter are intended to maintain and preserve the quality of the subsurface and groundwaters, prevent and abate pollution and contamination, protect public health, and permit management of the groundwaters for their best usage by the citizens of North Carolina. It is the policy of the EMC that the best usage of the groundwater of the state is as a source of drinking water in its ambient state. These groundwaters generally are a potable source of drinking water without the necessity of treatment. It is the intent of these Regulations to protect the overall high quality of North Carolina's groundwaters and to enhance and restore the quality of degraded groundwaters to the level established by the standards wherever practicable.~~

Statutory Authority G.S. 143-214.1; 143-214.2; 143-215.3(a)(1); 143B-282.

.0102 DEFINITIONS

The definition of any word or phrase used in these ~~regulations~~ Rules shall be the same as given in G.S. 143-213 except that the following words and phrases shall have the following meanings:

~~(1) Deleterious substance means any substance which may cause the water to be unpleasant to taste, or unsightly, or otherwise renders the water unsuitable for human consumption.~~

(1) "Alternate contaminant concentration" means the allowable concentration of a contaminant, in excess of water quality standards, as established for restoration activities.

(2) "Bedrock" means any consolidated or coherent and relatively hard, naturally-formed mass of mineral matter which cannot be readily excavated without the use of explosives or power equipment.

(3)~~(22)~~"Commission" ~~shall mean~~ means the Environmental Management Commission as organized under ~~General Statute Section 143B-282, et seq.~~ G.S. 143B.

~~(23) "Land Surface" for the purpose of determining the location of GB waters shall be the existing contour of the earth, whether the natural contour or artificially altered by~~

~~excavation. In the case of an alteration of the existing land surface by the addition of fill material, the land surface is the natural contour of the earth as it existed prior to any alteration. Where it is determined that a person has intentionally altered the surface of the earth for the purpose of evading the regulations and standards contained in this Subchapter, the phrase, "land surface" shall mean the contour of the earth that existed prior to such activity.~~

(4)~~(25) Perimeter of~~ "Compliance boundary" means a boundary around a disposal system at and beyond which water quality standards may not be exceeded and only applies to facilities which are applying for or have received a permit from the Division of Environmental Management under G.S. 143-215.1, or for disposal systems permitted by the Department of Human Resources. ~~shall mean the locus of all points in the vertical plane extending downward from the points of compliance surrounding a point of discharge.~~

~~(5) Micrograms per liter (ug/l) gives the weight in micrograms of any constituent in one liter of solution.~~

~~(6) Milligrams per liter (mg/l) is the weight in milligrams of any specific constituent or constituents in a liter of the solution.~~

(5)~~(26)~~"Director" ~~shall mean~~ means director of the Division of Environmental Management.

(6)~~(2)~~"Fresh groundwaters" ~~are~~ means those groundwaters having a chloride concentration equal to or less than 250 milligrams per liter.

~~(7) Naturally occurring concentration means the concentration of chemical or biological substances or physical characteristics which exist naturally and which have not been changed by man's activities.~~

(7)~~(3)~~"Groundwaters" ~~are~~ means those waters in the saturated zone of the earth.

~~(4) Infiltration water means the water that infiltrates or moves into the subsurface or occurs between the land surface and the top of the saturated zone or serves to recharge groundwaters.~~

(8) "Limit of detectability" means the method detection limit established for the U.S. EPA approved test procedure providing the lowest method detection limit for the substance being monitored.

(9)~~(8)~~"Natural ~~quality~~ conditions" means the physical, biological, ~~and~~ chemical and radiological conditions ~~quality~~ which occurs naturally. ~~and which has not been changed by man's activities.~~

~~(9) Parts per million (ppm) and parts per billion (ppb) shall be construed to be equivalent to milligrams per liter and micrograms per liter, respectively.~~

~~(24) "Point of Compliance" shall be the point at the land surface at which penalties under G.S. 143-214.6(a)(1)(b) may be imposed for a violation of applicable underground water quality standards. (See Rule .0103(h) of this Subchapter).~~

~~(10) Point of discharge or outlet is the point of initial contact of waste with the existing soil or rock materials.~~

(10)~~(11)~~"Potable waters" ~~are~~ means those waters suitable for drinking, by humans. ~~culinary and food processing purposes.~~

(11)~~(12)~~"Saline groundwaters" ~~are~~ means those groundwaters having a chloride concentration of more than 250 mg/l.

(12)~~(13)The saturated~~"Saturated zone" ~~is~~ means that part of the ~~water-bearing consolidated and unconsolidated formations~~ subsurface below the water table in which all the interconnected voids are filled with water under pressure at or greater than atmospheric. It does not include the capillary fringe.

~~(14) Subsurface means the area beneath the land surface and may or may not be part of the saturated zone.~~

~~(15) Subsurface waters are those waters occurring in the subsurface and include groundwaters and infiltration waters.~~

~~(16) Toxic substances shall mean those substances which if ingested or assimilated into any organism either directly or indirectly will cause death, disease, behavioral abnormalities, cancer, genetic mutations, physiological malfunctions (including malfunctions in such organisms of their offspring).~~

(13) "Suitable for drinking" means a quality of water which does not contain substances in concentrations which, either singularly or in combination if ingested into the human body, will cause death, disease, behavioral abnormalities, congenital defects, genetic mutations, or result in an incremental lifetime cancer risk in excess of 1×10^{-6}, or render the water unacceptable due to aesthetic qualities, including taste, odor and appearance.

~~(17) The unsaturated zone is the portion of the consolidated and unconsolidated formations between land surface and the water table. It includes the capillary fringe.~~

(14) "Waste boundary" means the horizontal perimeter of the permitted waste disposal area.

(15)~~(18)~~"Water table" ~~is~~ means the surface of the saturated zone ~~in the unconfined water-bearing formation or material~~ below which all interconnected voids are filled with water and at which the pressure is atmospheric.

~~(19) Thermal waste for purposes of groundwater quality means discharges having a temperature which is in excess of 30 degrees Fahrenheit above or below the naturally occurring temperature of the receiving groundwater as determined by the director.~~

~~(20) Underground waters means all waters in the subsurface including infiltration and groundwaters.~~

~~(21) "Person" shall mean any individual, proprietorship, partnership, joint venture, corporation, or any other entity, or any employee, designee, agent, or representative in any official capacity empowered to act in behalf of that entity with knowledge of that entity, either express or implied.~~

Statutory Authority G.S. 143-214.1; 143-215(a)(1); 143B-282.

.0103 POLICY

(a) ~~The discharge of any wastes to the subsurface or groundwaters of the state by means of wells is prohibited.~~ The rules established in this Subchapter are intended to maintain and preserve the quality of the groundwaters, prevent and abate pollution and contamination of the waters of the state, protect public health, and permit management of the groundwaters for their best usage by the citizens of North Carolina. It is the policy of the commission that the best usage of the groundwaters of the state is as a source of drinking water. These groundwaters generally are a potable source of drinking water without the necessity of treatment. It is the intent of these Rules to protect the overall high quality of North Carolina's groundwaters and to enhance and restore the quality of degraded groundwaters to the level established by the standards, wherever practicable.

(b) ~~(g)~~ It is the intention of the Environmental Management Commission to protect all ~~the underground waters existing below a depth of 20 feet beneath the surface of the land~~ groundwaters to a level of quality at least as high as that required under the standards established in Rule .0202 of this Subchapter. However, the commission may permit degradation of groundwater quality below the level of the applicable standards within boundaries established in accordance with the rules of this Subchapter. ~~In keeping with the overall policy of the EMC to protect, maintain, and enhance water quality within the State of North Carolina, the EMC~~ The commission will not approve any ~~project or development~~ disposal system subject to the provisions of G.S. 143-215.1 which would result in ~~the significant degradation of groundwaters whose existing quality is better than the assigned standard,~~ a violation of the water quality standards beyond the boundaries of the property on which the source of pollution is located, or which would result in the impairment of existing groundwater uses or would adversely impact the public health, safety, or welfare. ~~unless such degradation is found to be economically and socially justifiable, and in the best public interest. It is within the authority and in keeping with the policies of the EMC to decline to allow degradation from the existing background quality of an underground water source down to the level of the standard without such social and economic justification. Prior to the approval of any project or development which will result in the significant degradation of groundwater quality, the EMC will solicit, through public notice, or public hearing, or both, comments from the public and governmental agencies relative to the project or development and anticipated underground water quality degradation.~~

~~(c) In addition to the GA, GSA, GB, GSB classifications assigned to underground waters as a provision of this Subchapter, the director is authorized to designate such underground waters "restricted" (RS) under any of the following circumstances:~~

~~(1) Where underground waters contain toxic or deleterious substances in excess of the maximum allowable concentrations established under this Subchapter, and restoration or treatment can be shown to be technologically and economically feasible.~~

~~(2) Where a statutory variance has been granted for the underground waters as provided is Paragraph (d) of this Rule.~~

~~(3) Where underground waters contain naturally occurring concentrations in excess of the standards established under Rule .0202(b) of this Subchapter whether or not restoration or treatment is feasible, but provided that restoration for naturally occurring excess concentrations may not be required of any person as a result of this designation.~~

~~(4) Where underground waters have been designated RS under Subparagraph (1) of this Paragraph, and where the source of~~

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~~contamination and the responsible person are identified, a compliance schedule shall be issued within 12 months of the underground waters being designated.~~

(c) The commission recognizes that the application of fertilizers and other agricultural chemicals on land used for agricultural or silvicultural activities may result in the presence of these substances in the underlying groundwaters in concentrations exceeding water quality standards, as established in Rule .0202 of this Subchapter, because of a seasonally high or fluctuating water table. The presence of these substances in concentrations in excess of water quality standards shall not be considered a violation if they result from applications made in accordance with label instructions, where applicable, or accepted agronomic practices, and do not occur in concentrations exceeding the water quality standards beyond the boundary of the property on which they were applied or below a depth of ten feet below land surface.

~~(d) Any person subject to the provisions of General Statute 143-215.1 may apply to the EMC for a variance from the groundwater classifications and quality standards established pursuant to these Regulations and North Carolina General Statute 143-214.1. A variance may be granted by the commission pursuant to the requirements of North Carolina General Statute 143-215.3(e). The burden of proof in any public hearing or other proceeding pursuant to North Carolina General Statute 143-215.3(e) shall be upon the applicant for a variance. No variance shall be granted to allow the discharge of waste to the subsurface or groundwaters of the state by means of wells or for an extension or expansion of the perimeter of compliance as established pursuant to the regulations of this Subchapter.~~

(d) ~~(b)~~ No person shall conduct or permit an activity which causes ~~cause~~ the concentration of any ~~toxic or deleterious substances~~ substance, to exceed that specified in Rule .0202 of this Subchapter, except as authorized by the rules of this Subchapter. ~~in accordance with a compliance schedule authorized by the director.~~

~~(e) Any person conducting an activity causing or significantly contributing to the violation of underground water quality standards may apply to the director for a compliance schedule. In such cases the director may authorize a compliance schedule requiring the restoration of the quality of the underground waters to the level of the standard, or to a level as close to the applicable standards hereunder as is economically and technologically feasible. In determination the structure, duration, level of compliance, and feasibility of a compliance schedule, the director shall consider the extent of any violations, the extent of any threat to human health or safety, the extent of damage to the environment, the total cost of the cleanup involved, the marginal cost of the cleanup required, further technological advances which might permit such cleanup, and the public and economic benefit of requiring such cleanup. Compliance schedules may be revised or revoked by the director if the terms of the compliance schedules are violated by the person operating thereunder, or if additional information on the extent and magnitude of the violation becomes known. Where is it determined that there was willful or intentional violation of the underground water quality standards, the director shall not grant a compliance schedule prior to instituting the appropriate enforcement provision under G.S. 143-214.6.~~

(e) ~~(f)~~ An activity or ~~source of pollution~~ disposal system operating under and in compliance with the terms of a ~~statutory~~ variance or a special order ~~compliance schedule established under these Regulations~~ is deemed to be in compliance with the water ~~groundwater~~ quality standards.

~~(h) Perimeter of Compliance. Existing and New Facilities.~~

~~(1) Exceedances of the standards established for the underground waters occurring within the perimeter of compliance shall not be subject to the penalty provisions applicable under 143-215.6(1)a.~~

~~(2) The commission shall otherwise consider underground waters existing within the compliance perimeter to be classified waters of the state, and shall require:~~

~~(A) that permits for all activities governed by G.S. 143-214.1 will be written to protect the level of groundwater quality established by GA standards;~~

~~(B) that necessary groundwater quality monitoring within the compliance perimeter will be required;~~

~~(C) that a violation of standards within the compliance perimeter be remedied through clean-up, recovery, containment, or other response which the commission determines to be necessary when any of the following conditions occur:~~

~~(i) a violation of the standard in adjoining GA waters occurs or can be reasonably predicted to occur considering hydrogeologic conditions, modeling, or other available evidence;~~

~~(ii) an imminent hazard or threat to the public health or safety exists or can be predicted.~~

~~(3) For existing facilities, the compliance perimeter shall be established at a distance~~

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~~500 feet from the point of discharge, or the property boundary, whichever is less.~~

~~(4) For new facilities, the compliance perimeter shall be established at the lesser of 250 feet from the point of discharge, or 50 feet within the property boundary.~~

~~(5) Nothing in this Rule shall be construed to prevent the commission from initiating enforcement action even when pollution occurs solely within the compliance perimeter based upon permit violations, imminent threat to the public health, safety, or the environment, or violations of any special order issued by the commission.~~

~~(i) Exemptions. The following activities shall not be subject to the regulations of this Subchapter:~~

~~(1) Upcoming resulting from water use activities conducted under and in compliance with a water use permit.~~

~~(2) The use of drilling fluids as approved under the well construction regulations.~~

Statutory Authority G.S. 143-214; 143-214.1; 143-214.2; 143-215.3(e); 143-215.3(a)(1); 143B-282.

.0104 RS DESIGNATION

~~Tests or analytical procedures to determine compliance or non-compliance with the underground water quality standards established in Rule .0202 of this Subchapter will be in accordance with:~~

~~(1) the methods described in Standard Methods for the Examination of Water and Wastewater, fifteenth edition, 1980, and the 1981 supplement thereto;~~

~~(2) testing, monitoring, on analytical procedures required as a condition of a permit issued by the Division of Environmental Management under N.C.G.S. 143-214.1; or~~

~~(3) methods approved by letter from the Director of the Division of Environmental Management.~~

The director is authorized to designate GA or GSA groundwaters as RS under any of the following circumstances:

(1) Where groundwaters contain concentrations of substances in excess of the water quality standards established under this Subchapter;

(2) Where a statutory variance has been granted as provided in Rule .0114 of this Subchapter; or

(3) Where an alternate contaminant concentration has been established by the director.

Statutory Authority G.S. 143-214.1; 143-215.3(a)(1); 143B-282(2).

.0105 ADOPTION BY REFERENCE (REPEALED)

Statutory Authority G.S. 143-214.1.

.0106 CORRECTIVE ACTION

Any person conducting, permitting or controlling an activity which causes an increase in the concentration of a substance above the water quality standard:

(1) as the result of activities not specifically permitted by the state, shall assess the cause, significance and extent of the violation of water quality standards; submit a plan for eliminating the source of contamination and for restoration; and implement the plan in accordance with a special order;

(2) at or beyond the review boundary, shall:

(a) demonstrate, through predictive calculations or modeling, that natural site conditions, facility designs and operation controls will prevent a violation of standards at the compliance boundary; or

(b) submit a plan for alteration of existing site conditions, facility design or operation controls that will prevent a violation at the compliance boundary, and implement that plan upon its approval by the director.

(3) at or beyond the compliance boundary, shall, assess the cause, significance and extent of the violation of water quality standards and submit results of investigation and a plan for restoration and implement the plan in accordance with a special order.

Statutory Authority G.S. 143-215.2; 143-215.3(a)(1); 143B-282.

.0107 ALTERNATE CONTAMINANT CONCENTRATION

(a) If the responsible party determines that it is not feasible to restore contaminated groundwaters to the level of the standards, then the responsible party may apply to the director for a Special Order by Consent and submit a proposal for alternate contaminant concentrations. The proposal shall address the potential for adverse effects on human health and the environment through consideration of:

(1) the physical and chemical characteristics of the contaminants, including the potential for migration;

(2) the hydrogeological characteristics of the impacted area and surrounding land;

Repealed Eff. July 1, 1988.

.0105 PERMITS

(a) It is the finding of the commission that the entire geographical area of the state is vulnerable to groundwater pollution from improperly located, constructed, operated, altered, or abandoned non-water supply wells and water supply wells not constructed in accordance with the standards set forth in Rule .0107 of this Section. Therefore, in order to insure reasonable protection of the groundwater resources, prior permission from the division must be obtained for the construction of the types of wells enumerated in Paragraph (b) of this Rule.

(b) No person shall locate or construct any of the following wells until a permit has been issued by the director:

(1) any water-well or well system with a design capacity of 100,000 gallons per day (gpd) or greater;

(2) any well added to an existing system where the total design capacity of such existing well system and added well will equal or exceed 100,000 gpd;

(3) any test well if the design capacity of the production well or well system will be 100,000 gpd or greater;

(4) any monitoring well;

(5) any recovery well;

(6) any well intended for the recovery of minerals or ores;

(7) any geophysical exploration well;

(8) any oil or gas exploration or recovery well;

(9) any well for recharge or injection purposes;

(10) any cathodic protection well;

(11) any well with a design deviation from the standards specified under the rules of this Subchapter.

(c) Monitoring wells associated with a wastewater treatment and disposal facility for which a permit must be obtained from the department may be permitted as part of that facility; provided, however, that the permit applicant comply with all provisions of this Subchapter including construction standards and reporting requirements.

(d) The commission may delegate, through a Memorandum of Agreement, to another state agency the authority to permit wells that are an integral part of a facility requiring a permit from the agency. In the absence of such agreement, all wells require a well construction permit in addition to any other permits.

(e) An application for a permit shall be submitted by the owner or his agent in duplicate to the department on forms furnished by the department, and shall include the following:

(1) For all wells:

(A) the owner's name (facility name);

(B) the owner's mailing address (facility address);

(C) description of the well type and activity requiring a permit;
(D) facility location (map);
(E) site plan showing location of all sources or potential sources of groundwater contamination and locations of proposed wells;
(F) location and description of existing wells on the same site or within the same well system;
(G) location of any test borings;
(H) construction diagram of proposed wells including specifications describing all materials to be used, methods of construction and means for assuring the integrity and quality of the finished well(s).

(2) For water supply wells, in addition to (e)(1) of this Rule, the application shall include:
(A) the number, yield and location of existing wells in the system;
(B) the design capacity of the proposed well(s);
(C) any other information that the department may reasonably deem necessary.

(3) For monitoring and recovery wells; in addition to the information required in (e)(1) of this Rule:
(A) A description of the subsurface conditions sufficient to evaluate the site. Data from test borings, wells pumping tests, etc., may be required as necessary;
(B) a description of the quantity, character and origin of the contamination;
(C) any other information that the department may reasonably deem necessary.

(f) In the event of an emergency, monitoring wells and/or recovery wells may be constructed after verbal approval is provided by the director. After the fact applications shall be submitted by the driller or owner within ten days after construction begins. The application shall include construction details of the monitoring well(s) and/or recovery well(s).

(g) It shall be the responsibility of the well owner or his agent to see that a permit is secured prior to the construction of any well for which a permit is required under the rules of the Subchapter.

History Note: Statutory Authority G.S. 87-87;
Eff. February 1, 1976;
Amended Eff. March 1, 1985; September 1, 1984; April 20, 1978.

.0106 WATER USE PERMIT

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(3) the rate and direction of groundwater flow;
(4) the proximity and withdrawal rates of local groundwater users;
(5) the current and predictable uses of groundwater in the area;
(6) the existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality;
(7) the proximity of the contaminant plume to hydraulically connected surface water;
(8) the current and predictable uses of surface water hydraulically connected to the contamination plume, including existing quality of those waters, and any water quality standards established for those surface waters;
(9) the potential for health risks caused by human exposure to the contaminants;
(10) the potential damage to wildlife, crops, vegetation and physical structures caused by exposure to the contaminants; and
(11) the persistence and permanence of the potential adverse effects.

(b) In determining the feasibility of groundwater quality restoration activities and evaluating the proposal for alternate contaminant concentrations, the director shall consider the extent of any threat to human health or safety, the extent of existing and potential damage to the environment, the total cost of the restoration involved, the marginal or incremental cost of the restoration required, the economic benefit accruing to the responsible party as a result of the violation, technological constraints which might, prevent restoration and the public and economic benefit of requiring such restoration. Upon the director's approval of the proposal, alternate contaminant concentrations will be authorized by a special order.

(c) In making the determination required in Paragraph (b) of this Rule, the director shall request public comments, in accordance with the provision of G.S. 143-215.4(b), prior to approving or authorizing alternate contaminant concentrations; provided that, the director, at any time and in his discretion, may authorize the responsible party to make preliminary studies or investigations which will result in a proposal for alternate contaminant concentrations, without receipt of public comments.

Statutory Authority G.S. 143-214.1; 143-215.3(a)(1); 143B-282(2).

.0108 COMPLIANCE BOUNDARY

(a) For disposal systems permitted prior to December 30, 1983, the compliance boundary is established at a horizontal distance of 500 feet from the waste boundary or at the property boundary, whichever is closer to the source.

(b) For disposal systems permitted on or after December 30, 1983, a compliance boundary shall be established 250 feet from the waste boundary, or 50 feet within the property boundary, whichever point is closer to the source.

(c) The boundary shall form a vertical plane extending from the water table to the maximum depth of saturation.

(d) For ground absorption sewage treatment and disposal systems which are permitted under 10 NCAC 10A .1900, the compliance boundary shall be established at the property boundary.

(e) A contravention of the applicable water quality standard within the compliance boundary shall not be subject to the penalty provisions applicable under G.S. 143-215.6(a)(1)a.

(f) The director shall require:
(1) that permits for all activities governed by G.S. 143-215.1 will be written to protect the level of groundwater quality, established by applicable standards, at the compliance boundary;
(2) that recommendations be made to protect the level of standards at the compliance boundary on all permit applications received for review from other state agencies;
(3) that necessary groundwater quality monitoring shall be conducted within the compliance boundary; and
(4) that a contravention of standards within the compliance boundary be remedied through clean-up, recovery, containment, or other response when any of the following conditions occur:
(A) a violation of any standard in adjoining classified waters occurs or can be reasonably predicted to occur considering hydrogeologic conditions, modeling, or other available evidence;
(B) an imminent hazard or threat to the public health or safety exists or can be predicted; or
(C) a violation of any standard in groundwater occurring in the bedrock other than limestones found in the coastal plain sediments.

Statutory Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143B-282.

.0109 REVIEW BOUNDARY

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A review boundary is established around disposal systems at the mid-point between the compliance boundary and the waste boundary. Where the groundwater quality standards are reached or exceeded at the review boundary as determined by monitoring, the permittee shall take action in accordance with the provisions of Rule .0106(a)(2) of this Subchapter.

Statutory Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143B-282.

.0110 DELEGATION

(a) The director is delegated the authority to enter into consent special orders under G.S. 143-215.2 for violations of the water quality standards.

(b) The director is delegated the authority to issue a proposed special order without the consent of the person affected and to notify the affected person of the procedure set out in G.S. 150B-23 to contest the proposed special order.

Statutory Authority G.S. 143-215.2; 143-215.3(a)(1).

.0111 MONITORING

(a) Any person subject to the provisions of G.S. 143-215.1 who causes, permits or has control over any discharge of waste, shall install a monitoring system, at such locations, and in such detail, as the director may require to evaluate the efficiency of the treatment facility and the effects of the discharge upon the waters of the state.

(b) Monitoring systems shall be operated in a manner that will not result in the contamination of adjacent groundwaters of a higher quality.

(c) Monitoring shall be conducted and results reported in a manner and at a frequency specified by the director.

Statutory Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143-215.65; 143-215.66; 143-215.68; 143B-282.

.0112 REPORTS

Any person subject to the provisions of G.S. 143-215.1 and to the requirements for corrective action specified in Rule .0106 of this Subchapter shall submit to the director, in such detail as the director may require, a written report that describes:

(1) the results of the investigation specified in Paragraphs (1) and (3) of Rule .0106, including but not limited to:

(a) a description of the sampling procedures followed and methods of chemical analyses used; and

(b) all technical data utilized in support of any conclusions drawn or determinations made.

(2) the results of the predictive calculations or modeling, including a copy of the calculations or model runs and all supporting technical data, used in the demonstration required in Paragraph (2) of Rule .0106; and

(3) the proposed methodology and timetable associated with the restoration of groundwater quality for those situations identified in Paragraphs (1) and (3) of Rule .0106.

Statutory Authority G.S. 143-215.1(b); 143-215.3(a)(1); 143-215.65; 143-215.68; 143B-282.

.0113 ANALYTICAL PROCEDURES

Tests or analytical procedures to determine compliance or noncompliance with the water quality standards established in Rule .0202 of this Subchapter will be in accordance with:

(1) The following methods or procedures for substances where the selected method or procedure provides a method detection limit value at or less than the standard:

(a) Standard methods for the Examination of Water and Wastewater, 16th Edition, 1985, published jointly by American Public Health Association, American Water Works Association and Water Pollution Control Federation;

(b) Methods for Chemical Analysis of Water and Waste, 1979, U.S. Environmental Protection Agency publication number EPA-600/4-79-020, as revised March 1983;

(c) Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods, 3rd Edition, 1986, U.S. Environmental Protection Agency publication number SW-846;

(d) Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Federal Register Vol. 49, No. 209, 40 CFR Part 136, October 26, 1984;

(e) Methods or procedures approved by letter from the director upon application by the regulated source.

(2) A method or procedure approved by the director for substances where the standard is less than the limit of detectibility.

Statutory Authority G.S. 143-215.3(a)(1); 143B-282.

.0114 VARIANCE

(a) The commission, on its own initiative or pursuant to a request under G.S. 143-215.3(e),

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may grant variances to water quality standards and the compliance boundary. Persons subject to the provisions of G.S. 130A-294 may apply for a variance under this Section.

(b) Requests for variances are filed by letter from the applicant to the Environmental Management Commission. The application should be mailed to the chairman of the commission in care of the Director, Division of Environmental Management, Post Office Box 27687, Raleigh, N.C. 27611.

(c) The application should contain the following information:

(1) Applications filed by counties or municipalities must include a resolution of the County Board of Commissioners or the governing board of the municipality requesting the variance from water quality standards which apply to the area for which the variance is requested.

(2) A description of the past, existing or proposed activities or operations that have or would result in a discharge of contaminants to the groundwaters.

(3) Description of proposed area for which a variance is requested. A detailed location map, showing orientation of the facility, potential for groundwater contaminant migration, as well as the area covered by the variance request, with reference to at least two geographic references (numbered roads, named streams/rivers, etc.) must be included.

(4) Supporting information to establish that the variance will not endanger the public health and safety, including health and environmental effects with exposure to the groundwater contaminants. (Location of wells and other water supply sources including details of well construction within 1/2 mile of site must be shown on a map).

(5) Supporting information to establish that standards cannot be achieved by providing the best available technology economically reasonable. This information must identify specific technology considered, changes in quality of the contaminant plume as demonstrated through predictive calculations approved by the director, and technological constraints which limit restoration to the level of the proposed alternate contaminant concentrations.

(6) Supporting information to establish that compliance would produce serious hardship on the applicant.

(7) Supporting information that compliance would produce serious hardship without equal or greater public benefit.

(8) A copy of any Special Order that was issued in connection with the contaminants in the proposed area and supporting information that applicant has complied with the Special Order and any alternate contaminant concentrations contained therein.

(d) Upon receipt of the application, the director will review it for completeness and request additional information if necessary. When the application is complete, the director shall give public notice of the application and schedule the matter for a public hearing in accordance with G.S. 143-215.4(d) and the procedures set out below.

(e) Notice of Public Hearing.

(1) Notice of public hearing on any variance application shall be circulated in the geographical areas of the proposed variance by the director at least 30 days prior to the date of the hearing:

(A) by publishing the notice one time in a newspaper having general circulation in said county;

(B) by mailing to the North Carolina Department of Human Resources, Division of Health Services, and appropriate local health agency;

(C) by mailing to any other federal, state or local agency upon request;

(D) by mailing to the local governmental unit or units having jurisdiction over the geographic area covered by the variance;

(E) by mailing to any property owner within the proposed area of the variance, as well as any property owners adjacent to the site covered by the variance; and

(F) by mailing to any person or group upon request.

(2) The contents of public notice of any hearing shall include at least the following:

(A) name, address, and phone number of agency holding the public hearing;

(B) name and address of each applicant whose application will be considered at the meeting;

(C) brief summary of the proposed standard variance or modification of the perimeter of compliance being requested;

(D) geographic description for a proposed area for which a variance is requested;

(E) brief description of the activities or operations which have or will result in the discharge of contaminants to the groundwaters described in the variance application;

(F) a brief reference to the public notice issued for each variance application;

(G) information regarding the time and location for the hearing;
(H) the purpose of the hearing;
(I) address and phone number of premises at which interested persons may obtain further information, request a copy of each application, and inspect and copy forms and related documents; and
(J) a brief description of the nature of the hearing including the rules and procedures to be followed. The notice shall also state that additional information is on file with the director and may be inspected at any time during normal working hours. Copies of the information on file will be made available upon request and payment of cost or reproduction.

(f) All comments received within 30 days following the date of the public hearing shall be made part of the application file and shall be considered by the commission prior to taking final action on the application.

(g) In determining whether to grant a variance, the commission shall consider whether the applicant has complied with any alternate contaminant concentrations established pursuant to Rule .0107 of this Section and has complied with any Special Order issued under G.S. 143-215.2.

(h) If the commission's final decision is unacceptable, the applicant may file a petition for a contested case in accordance with Chapter 150B of the General Statutes. If the petition is not filed within 30 days, the decision on the variance shall be final and binding.

(i) A variance shall not operate on a defense to an action at law based upon a public or private nuisance theory or any other cause of action.

Statutory Authority G.S. 143-215.3(a)(1); 143-215.3 (a) (3); 143-215.3 (a) (4); 143-215.3 (e); 143-215.4.

SECTION .0200 - CLASSIFICATIONS AND WATER QUALITY STANDARDS

.0201 CLASSIFICATIONS

The classifications which may be assigned to the ~~underground waters~~ groundwaters will be those specified in the following series of classifications:

(1) Class GA waters; usage and occurrence:
(a) Best Usage. ~~of Waters.~~ Existing or potential source of drinking water supply for humans. ~~drinking, culinary use, and food processing without treatment, except where necessary to correct naturally occurring conditions.~~
(b) Conditions Related to Best Usage. This class is intended for those groundwaters in which chloride concentrations are equal to or less than 250 mg/l, and which are considered suitable ~~safe~~ for drinking, but which may require treatment to improve quality related to natural conditions. ~~culinary use, and food processing without treatment, but which may require disinfection or other treatment when necessary to reduce naturally occurring concentrations in order not to exceed the maximum concentrations specified in Rule .0202 of this Section.~~
(c) Occurrence. ~~At depths greater than 20 feet below land surface and in~~ In the saturated zone. ~~above a depth of 20 feet where these waters are a principal source of potable water supply.~~

(2) Class GSA waters; usage and occurrence:
(a) Best Usage. Existing or potential source of water supply for potable mineral water ~~culinary use, food processing,~~ and conversion to fresh waters. ~~by treatment.~~
(b) Conditions Related to Best Usage. This class is intended for those groundwaters in which ~~naturally occurring~~ the chloride concentrations due to natural conditions is in excess of ~~are greater than~~ 250 mg/l, ~~and~~ but which ~~are~~ otherwise may be considered ~~safe~~ suitable for use as potable ~~mineral~~ water after treatment to reduce concentrations of naturally occurring substances. ~~culinary use, and food processing without treatment but may require disinfection or other treatment when necessary to reduce naturally occurring concentrations in order not to exceed the maximum concentrations specified in Rule .0202 of this Section.~~
(c) Occurrence. ~~At depths greater than 20 feet below land surface and in~~ In the saturated zone. ~~above a depth of 20 feet where these waters are a principal source of potable mineral water supply.~~

~~(3) Class GB waters; usage and occurrence:~~
~~(a) Best Usage. Source of recharge to surface waters and groundwaters occurring below a depth of 20 feet, source of treatable water supply.~~
~~(b) Conditions Related to Best Usage. Precipitation is the principal source of recharge to the saturated zone. The water in the saturated zone above a depth of 20 feet is of drinking water quality in much of the state. However, the upper 20 feet of the earth's surface is generally very vulnerable to pollution from man's activities, and should be considered a cycling zone for removing most or all of the~~

~~contaminants from the water by adsorption, absorption, filtration or other natural treatment processes. In recognition of this fact, this classification is intended for those fresh groundwaters occurring at depths less than 20 feet below land surface that are of suitable quality for recharge to the deeper aquifers and surface waters of the state.~~

~~(c) Occurrence. Above a depth of 20 feet below land surface.~~

~~(4) Class GSB waters; usage and occurrence:~~

~~(a) Best Usage. Source of recharge to saline surface waters and saline groundwaters occurring below a depth of 20 feet, source of treatable water supply.~~

~~(b) Conditions Related to Best Usage. Precipitation is the principal source of recharge to the saturated zone. The water in the saturated zone above a depth of 20 feet of the earth's surface is generally very vulnerable to pollution from man's activities and should be considered a cycling zone for removing most or all of the contaminants from the water by adsorption, absorption, filtration or other natural treatment processes. In recognition of this fact, this classification is intended for those saline groundwaters occurring at depths less than 20 feet below land surface that are of suitable quality for recharge to the deeper aquifers and surface waters of the state.~~

~~(c) Occurrence. Above a depth of 20 feet below land surface.~~

~~(3)(5)~~ Class GC waters: usage and occurrence:

(a) Best Usage. ~~of Waters.~~ Source of water supply for purposes other than ~~human~~ drinking. ~~culinary use, or food processing.~~

(b) Conditions Related to Best Usage. This class includes those ~~waters~~ groundwaters that do not meet the quality criteria ~~requirements~~ of waters having a higher classification and for which ~~measures~~ efforts to ~~upgrade~~ restore in-situ to a higher classification would not be ~~technically~~ technologically ~~or economically not be~~ feasible, or not in the best interest of the public, ~~or~~ and for which ~~maximum feasible restoration has been completed.~~ treatment at the point of use to a quality suitable for drinking is not technologically feasible.

(c) Occurrence. In the saturated zone, as determined by the commission on a case by case basis.

Statutory Authority G.S. 143-214.1; 143B-282(2).

.0202 WATER QUALITY STANDARDS

(a) The water quality standards for the ~~underground waters~~ groundwaters of the state are those specified in this Rule. They are the maximum allowable concentrations resulting from any discharge of contaminants to the land or waters of the state, which may be tolerated without creating a threat to human health or which would otherwise render the groundwater unsuitable for its intended best usage. Where groundwater quality standards have been exceeded due to man's activities, restoration efforts shall be designed to restore groundwater quality to the level of the standard or as closely there to as is practicable. In recognition of circumstances or conditions which may prevent restoration to the level of the standards, the director may authorize alternate contaminant concentrations in accordance with Rule .0107 of this Subchapter. ~~These standards are the maximum levels of contamination that are permitted under these Regulations. It is the policy of the EMC, however, to protect and maintain the existing quality of the groundwaters where that quality is better than the assigned standards. Therefore, the increase in any constituent for which a standard is specified to a concentration of 50 percent of the standard may result in review or modification of an existing permit, requirements for additional monitoring, or issuance of a special order where a violation of standards may be predicted.~~

(b) The standards will not be considered violated when concentrations of substances which exceed the established limits are attributable to natural conditions.

(c) Maximum concentrations for substances are established as the lesser of:

(1) Health advisory based on the no-observed-adverse-effect-level (NOAEL) or lowest-observed-adverse-effect-level (LOAEL);

(2) Concentration which corresponds to an incremental lifetime cancer risk of $1x10^{-6}$

(3) Taste threshold limit value;

(4) Odor threshold limit value;

(5) National primary drinking water standard; or

(6) National secondary drinking water standard.

(d) The maximum concentrations for contaminants specified in Paragraphs (h) and (i) of this Rule, shall be as listed.

(e) Maximum concentrations for substances not specified in Paragraphs (h) and (i) of this Rule, shall be determined by the director in ac-

cordance with the procedures established in Paragraph (c) of this Rule. Where available data does not enable development of maximum concentrations in accordance with established procedures, the director shall consider appropriate U.S. Environmental Protection Agency data and other published health effects data in developing maximum concentrations.

(f) Where the maximum concentration of a substance is less than the limit of detectability, the substance shall not be permitted in detectable concentrations.

(g) Where two or more substances exist in combination, the director shall consider the effects of chemical interactions and may establish maximum concentrations at values less than those established in accordance with Paragraphs (d) and (e) of this Rule. In the absence of information to the contrary, the carcinogenic risks associated with carcinogens present shall be considered additive and the toxic effects associated with non-carcinogens present shall also be considered additive.

(h) ~~(b)~~ Class GA Standards. ~~Waters. The maximum allowable contaminant levels for toxic and deleterious substances are those concentrations specified in Subparagraphs (1) - (31) of this Paragraph. For substances not specified, the standard is the naturally occurring concentration as determined by the director. Synthetic, man-made, or other substances that do not naturally occur are prohibited.~~ Where not otherwise indicated, the standard refers to the total concentration in milligrams per liter of any constituent.

~~(1) where naturally occurring concentrations exceed the established standard, the standard will be the naturally occurring concentration as determined by the director;~~

(1) acrylamide (propenamide): 0.00001
(2) alachlor: 0.00015
(3) aldicarb (TEMIK): 0.009
(4)~~(10)~~ arsenic: 0.05 ~~mg/l;~~
(5)~~(11)~~ barium: 1.0 ~~mg/l;~~
(6) benzene: 0.0007
(7) bromoform (tribromomethane): 0.00019
(8)~~(12)~~ cadmium: ~~.010 mg/l~~ 0.005
(9) carbofuran: 0.036
(10) carbon tetrachloride: 0.0003
(11) chlordane: 2.7×10^{-5}
(12)~~(27)~~ chloride: ~~250.0 mg/l~~
(13) chlorobenzene: 0.3
(14) chloroform (trichloromethane): 0.00019
(15) 2-chlorophenol: 0.0001
(16)~~(13)~~ chromium: ~~0.05 mg/l~~
(17) cis-1,2-dichloroethene: 0.07
(18)~~(2)~~ ~~total~~ coliform organisms (total): 1 per 100 milliliters
(19)~~(28)~~ color: ~~less than~~ 15 color units
(20) copper: 1.0
(21) cyanide: 0.154
(22)~~(7)~~ 2, 4-D (2,4-dichlorophenoxy acetic acid): 0.07 ~~0.1 mg/l;~~
(23) 1,2-dibromo-3-chloropropane: 2.5×10^{-5}
(24) dichlorodifluoromethane (Freon-12; Halon): 0.00019
(25) 1,2-dichloroethane (ethylene dichloride): 0.00038
(26) 1,1-dichloroethylene (vinylidene chloride): 0.007
(27) 1,2-dichloropropane: 0.00056
(28) p-dioxane (1,4-diethylene dioxide): 0.007
(29) dioxin: 2.2×10^{-10}
(30) ~~total~~ dissolved solids (total): 500 ~~mg/l; and~~
(31)~~(3)~~ endrin: 0.0002 ~~mg/l~~
(32) epichlorohydrin (1-chloro-2,3-epoxypropane): 0.00354
(33) ethylbenzene: 0.029
(34) ethylene dibromide (EDB; 1,2-dibromoethane): 0.05×10^{-5}
(35) ethylene glycol: 7.0
(36)~~(20)~~ flouride: 2.0 ~~1.5 mg/l;~~
(37) foaming agents: 0.5
(38)~~(22)~~ gross alpha particle activity (including radium-226 but excluding radon and uranium): 15 pCi/l
~~(23) gross beta particle activity: 50 pCi/l;~~
(39) heptachlor: 7.6×10^{-5}
(40) heptachlor epoxide: 3.8×10^{-5}
(41) hexachlorobenzene (perchlorobenzene): 0.00002
(42) n-hexane: 14.3
(43)~~(24)~~ iron: 0.3 ~~0.30 mg/l;~~
(44)~~(14)~~ lead: 0.05 ~~mg/l;~~
(45)~~(4)~~ lindane: 2.65×10^{-5} ~~.004 mg/l;~~
(46)~~(25)~~ manganese: 0.05 ~~mg/l;~~
(47)~~(15)~~ mercury: 0.0011 ~~mg/l;~~
(48) metadichlorobenzene (1,3-dichlorobenzene): 0.62
(49)~~(5)~~ methoxychlor: 0.1 ~~mg/l;~~
(50) methylene chloride (dichloromethane): 0.005
(51) methyl ethyl ketone (MEK; 2-butanone): 0.17
(52) nickel: 0.15
(53)~~(16)~~ nitrate: (as N) 10.0 ~~mg/l;~~
(54)~~(17)~~ nitrite: (as N) 1.0 ~~mg/l;~~
(55) orthodichlorobenzene (1,2-dichlorobenzene): 0.62
(56) oxamyl: 0.175
(57) paradichlorobenzene (1,4-dichlorobenzene): 0.0018
(58) pentachlorophenol: 0.22
(59)~~(26)~~ pH: 6.5 - 8.5 ~~no increase from naturally occurring pH values in acidity below or increase in alkalinity above 7;~~

~~(29) phenol: not greater than 1.0 ug/l;~~
(60)~~(21)~~ ~~combined~~ radium-226 and radium-228 (combined): 5 pCi/l
(61)~~(18)~~ selenium: 0.01 ~~mg/l;~~
(62)~~(19)~~ silver: 0.05 ~~mg/l;~~
(63) styrene (ethenylbenzene): 1.4 x 10^{-5}
(64) sulfate: 250.0
~~(31) thermal; not greater than 30 degrees Fahrenheit variance from the naturally occurring level as determined by the director;~~
(65) tetrachloroethylene (perchloroethylene; PCE): 0.0007
(66) toluene (methylbenzene): 1.0
(67)~~(6)~~ toxaphene: 3.1 x 10^{-5} ~~.005 mg/l;~~
(68)~~(8)~~ 2, 4, 5,-TP (Silvex): 0 .01 ~~mg/l;~~
~~(9) total trihalomethanes: 0.10 mg/l;~~
(69) trans-1,2-dichloroethene: 0.07 .005
(70) 1,1,1-trichloroethane (methyl chloroform): 0.2 0.2
(71) trichloroethylene (TCE): 0.0028 .005
(72) vinyl chloride (chloroethylene): 1.5 x 10^{-5} .002
(73) xylenes (o-, m-, and p-): 0.4
(74) zinc: 5.0

(i) ~~(e)~~ Class GSA ~~Waters.~~ Standards. The standards for this class shall be the same as those for Class GA except as follows:
(1) chloride: allowable increase not to exceed 100 percent of the natural quality concentration; and
(2) total dissolved solids: 1000 mg/l.

~~The maximum allowable contaminant levels for toxic and deleterious substances are those concentrations specified Subparagraphs (1) - (31) of this Paragraph. For substances not specified, the standard is the naturally occurring concentration as determined by the director. Synthetic, man-made, or other substances that do not naturally occur are prohibited. Where not otherwise indicated, the standard refers to the total concentration of any constituent.~~
~~(1) where naturally occurring concentrations exceed the established standard, the standard will be the naturally occurring concentration as determined by the director;~~
~~(2) total coliform: 1 per 100 milliliters;~~
~~(3) endrin: .0002 mg/l;~~
~~(4) lindane: .004 mg/l;~~
~~(5) methoxychlor: 0.1 mg/l;~~
~~(6) toxaphene: .005 mg/l;~~
~~(7) 2,4,D: 0.1 mg/l;~~
~~(8) 2,4,5, TP Silvex .01 mg/l;~~
~~(9) total trihalomethanes: 0.10 mg/l;~~
~~(10) arsenic: .05 mg/l;~~
~~(11) barium: 1.0 mg/l;~~
~~(12) cadmium: .010 mg/l;~~
~~(13) chromium: .05 mg/l;~~
~~(14) lead: .05 mg/l;~~
~~(15) mercury: .002 mg/l;~~
~~(16) nitrate: (as N) 10.0 mg/l;~~
~~(17) nitrite: (as N) 1.0 mg/l;~~
~~(18) selenium: .01 mg/l;~~
~~(19) silver: .05 mg/l;~~
~~(20) fluoride: 1.5 mg/l;~~
~~(21) combined radium - 226 and radium - 228: 5 pCi/l;~~
~~(22) gross alpha particle activity: 15 pCi/l;~~
~~(23) gross beta particle activity: 50 pCi/l;~~
~~(24) iron: 0.30 mg/l;~~
~~(25) manganese: .05 mg/l;~~
~~(26) pH: No increase from naturally occurring pH values in acidity below or increase in alkalinity above 7;~~
~~(27) chloride: allowable increase not to exceed 100 percent of the naturally occurring chloride concentration;~~
~~(28) color less than 15 units;~~
~~(29) phenol: not greater than 1.0 ug/l;~~
~~(30) total dissolved solids: 1000 mg/l; and~~
~~(31) thermal: not greater than 30 degrees Fahrenheit variance from the naturally occurring level as determined by the director.~~

~~(d) Class GB Waters. No increase above the naturally occurring concentration of any toxic or deleterious substance unless it can be shown, upon request, to the satisfaction of the director that the increase:~~
~~(1) will not cause or contribute to the contravention of water quality standards in adjoining waters of a different class;~~
~~(2) will not accumulate in a manner such that unusual or different hydrological conditions may cause a threat to public health or the environment; and~~
~~(3) will not cause an existing or potential water supply to become unsafe or unsuitable for its current use.~~

~~(e) Class GSB Waters. No increase above the naturally occurring concentration of any toxic or deleterious substance unless it can be shown, upon request, to the satisfaction of the director that the increase:~~
~~(1) will not cause or contribute to the contravention of water quality standards in adjoining waters of a different class;~~
~~(2) will not accumulate in a manner such that unusual or different hydrological conditions may cause a threat to public health or the environment; and~~
~~(3) will not cause an existing or potential water supply to become unsafe or unsuitable for its current use.~~

(d) ~~(f)~~ Class GC Waters. ~~All chemical, radioactive, biological, taste producing, odor producing, thermal, and other toxic or deleterious~~

~~substances shall not exceed the concentration existing at the time of classification.~~

(1) The concentrations of substances which, at the time of classification exceed water quality standards, shall not be permitted to increase. For all other substances, concentrations shall not be caused or permitted to exceed the established standard.

(2) The concentrations of substances which, at the time of classification, exceed water quality standards shall not cause or contribute to the contravention of groundwater or surface water quality standards in adjoining waters of a different class.

(3) Concentrations of specific substances, which exceed the established standard at the time of classification, shall be listed in Section .0300 of this Subchapter.

Statutory Authority G.S. 143-214.1; 143B-282(2).

SECTION .0300 - ASSIGNMENT OF UNDERGROUND WATER CLASSIFICATIONS

.0301 CLASSIFICATIONS: GENERAL

(a) Schedule of Classifications. The classifications are based on the quality, occurrence and existing or contemplated best usage of the ~~underground waters~~ groundwaters as established in Section .0200 of this Subchapter and are assigned statewide except where supplemented or supplanted by specific classification assignments by major river basins.

(b) Classifications and Water Quality Standards. The classifications and standards assigned to the ~~underground waters~~ groundwaters are denoted by the letters GA, GSA, ~~GB, GSB,~~ or GC. These classifications refer to the classifications and standards established by ~~15 NCAC 2L, "Classifications and Standards Applicable to the Underground Waters of North Carolina."~~ Rule .0201 of this Subchapter.

Statutory Authority G.S. 143-214.1; 143-282(2).

.0302 STATEWIDE

~~(a)~~ The classifications assigned to the ~~underground waters~~ groundwaters located within the boundaries or under the extraterritorial jurisdiction of the State of North Carolina are:

(1) Class GA Waters. Those ~~underground waters~~ groundwaters in the state naturally containing ~~less than~~ 250 mg/l or less of chloride ~~and occurring at depths greater than 20 feet below land surface~~ are classified GA.

~~(2) Class GB Waters. Those underground waters in the state naturally containing less than 250 mg/l chloride concentration and occurring between land surface and a depth of 20 feet are classified GB.~~

(2)~~(3)~~ Class GSA Waters. Those ~~underground waters~~ groundwaters in the state naturally containing greater than 250 mg/l chloride ~~concentration and occurring at depths greater than 20 feet below land surface~~ are classified GSA.

~~(4) Class GSB Waters. Those underground waters in the state naturally containing greater than 250 mg/l chloride concentration and occurring between land surface and a depth of 20 feet are classified GSB.~~

(3)~~(5)~~ Class GC Waters. Those ~~underground waters~~ groundwaters assigned the classification GC in Rules .0303 - .0318 of this Section.

Statutory Authority G.S. 143-214.1; 143-282(2).

.0319 RECLASSIFICATION

The ~~underground water~~ groundwater classifications as assigned may be revised by the ~~EMC~~ commission following public notice and subsequent public hearing. Changes may be to a higher or lower classification. Reclassification requests may be submitted to the Director. ~~of the Division of Environmental Management.~~

Statutory Authority G.S. 143-214.1; 143-215.3(e); 143B-282(2).

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Notice is hereby given in accordance with G.S. 150B-12 that the Division of Coastal Management intends to amend regulation cited as 15 NCAC 7H .0104.

The proposed effective date of this action is November 1, 1988.

The public hearing will be conducted at 10:00 a.m. on July 28, 1988 at Duke Marine Lab Auditorium, Pivers Island, Beaufort, North Carolina.

Comment Procedures: All persons interested in this matter are invited to attend the public hearing. The Coastal Management Division will receive written comments up to the date of the hearing. Any person desiring to present lengthy comments is requested to submit a written statement for inclusion in the record of proceedings at the public hearing. Additional information concerning the hearing or the proposal may be obtained by con-

NORTH CAROLINA ADMINISTRATIVE CODE

TITLE 15

DEPARTMENT OF ENVIRONMENT, HEALTH & NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL MANAGEMENT

SUBCHAPTER 2C

WELL CONSTRUCTION STANDARDS

SECTION .0100

CRITERIA AND STANDARDS APPLICABLE TO WATER SUPPLY AND CERTAIN OTHER TYPE WELLS

CURRENT THROUGH JULY 1, 1988

ENVIRONMENTAL MANAGEMENT COMMISSION

RALEIGH, NORTH CAROLINA

GW

CRITERIA AND STANDARDS APPLICABLE TO WATER SUPPLY AND OTHER TYPE WELLS

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SUBCHAPTER 2C - WELL CONSTRUCTION STANDARDS

SECTION .0100 - CRITERIA AND STANDARDS APPLICABLE TO WATER-SUPPLY AND CERTAIN OTHER TYPE WELLS

.0101 GENERAL PROVISIONS

(a) Authorization. The North Carolina Environmental Management Commission is required, under the provisions of Chapter 87, Article 7, Section 87, General Statutes of North Carolina (short title: North Carolina Well Construction Act) to adopt appropriate rules and regulations governing the location, construction, repair, and abandonment of wells, and the installation and repair of pumps and pumping equipment.

(b) Consistent with the duty to safeguard the public welfare, safety, health, and to protect and beneficially develop the ground-water resources of the state, it is declared to be the policy of this state to require that the location, construction, repair and abandonment of wells, and the installation of pumps and pumping equipment conform to such reasonable standards and requirements as may be necessary to protect the public welfare, safety, health, and ground-water resources.

History Note: Statutory Authority G.S. 87-87;
Eff. February 1, 1976;
Amended Eff. July 1, 1988.

.0102 DEFINITIONS

As used herein, unless the context otherwise requires:

(1) "Abandon" means to discontinue the use of and to seal the well according to the requirements of Rule .0113 of this Section.

(2) "Access port" means an opening in the well casing or well head installed for the primary purpose of determining the position of the water level in the well.

(3) "Agent" means any person who by mutual and legal agreement with a well owner has authority to act in his behalf in executing applications for permits. The agent may be either general agent or a limited agent authorized to do one particular act.

(4) "Casing" means pipe or tubing constructed of specified materials and having specified dimensions and weights, that is installed in a borehole, during or after completion of the borehole, to support the side of the hole and thereby prevent caving, to allow completion of a well, to prevent formation material from entering the well, to prevent the loss of drilling fluids into

permeable formations, and to prevent entry of undesirable water.

(5) "Commission" means the North Carolina Environmental Management Commission or its successor, unless otherwise indicated.

(6) "Consolidated rock" means rock that is firm and coherent, solidified or cemented, such as granite, gneiss, limestone, slate or sandstone, that has not been decomposed by weathering.

(7) "Contamination" means the act of introducing into water foreign materials of such nature, quality, and quantity as to cause degradation of the quality of the water.

(8) "Designed capacity" shall mean that capacity that is equal to the rate of discharge or yield that is specified prior to construction of the well.

(9) "Domestic use" means water used for drinking, bathing, household purposes, livestock or gardens.

(10) "Grout" shall mean and include the following:

(a) "Neat cement grout" means a mixture of not more than six gallons of clear water to one 94 pound bag of portland cement. Up to five percent, by weight, of bentonite clay may be used to improve flow and reduce shrinkage.

(b) "Sand cement grout" means a mixture of not more than two parts sand and one part cement and not more than six gallons of clear water per 94 pound bag of portland cement.

(c) "Concrete grout" means a mixture of not more than two parts gravel to one part cement and not more than six gallons of clear water per 94 pound bag of portland cement. One hundred percent of the gravel must pass through a one-half inch mesh screen.

(d) "Gravel, sand cement grout or rock cutting cement grout" means a mixture of not more than two parts gravel and sand or rock cuttings to one part cement and not more than six gallons of clear water per 94 pound bag of portland cement.

(11) "Liner pipe" means pipe that is installed inside a completed and cased well for the purpose of sealing off undesirable water or for repairing ruptured or punctured casing or screens.

(12) "Monitoring well" means any well constructed for the primary or incidental purpose of obtaining subsurface samples of water or other liquids. This definition excludes lysimeters, tensiometers, and other devices used to investigate the characteristics of the unsaturated zone.

(13) "Observation well" means any well constructed for the purpose of obtaining groundwater level information only.

(14) "Owner" means any person who holds the fee or other property rights in the well being constructed. A well is real property and its construction on land rests ownership in the land owner in the absence of contrary agreement in writing.

(15) "Public water system"

(a) "Public water system" means a system for the provision, to the public, of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Such term includes:

(i) any collection, treatment, storage, and distribution facility under control of the operator of such system and used primarily in connection with such system; and

(ii) any collection or pre-treatment storage facility not under such control which is used primarily in connection with such system.

(b) A public water system is either a "community water system" or a "non-community water system":

(i) "Community water system" means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

(ii) "Non-community water system" means a public water system which is not a community water system.

(16) "Recovery well" means any well constructed for the purpose of removing contaminated groundwater or other liquids from the subsurface.

(17) "Site" means the land or water area where any facility, activity or situation is physically located, including adjacent or nearby land used in connection with the facility, activity or situation.

(18) "Specific capacity" means the yield of the well expressed in galloms per minute per foot of draw-down of the water level (gpm/ft.-dd).

(19) "Static level" means the level at which the water stands in the well when the well is not being pumped and is expressed as the distance from a fixed reference point to the water level in the well.

(20) "Well capacity" shall mean the maximum quantity of water that a well will yield continuously.

(21) "Well head" means the upper teminal of the well imcluding adapters, ports, valves, seals, and other attachments.

(22) "Well system" means two or more wells serving the same facility.

(23) "Pitless adapter unit" is a device specifically manufactured to the standards specified under Rule .0107

(i)(4) of this Section for the purpose of allowing a subsurface lateral connection between a well and plumbing appurtenances.

(24) "Director" means the Director of the Division of Environmental Management.

(25) "Division" means the Division of Environment Management.

History Note: Statutory Authority G.S. 87-85; 87-87; 143-214.2; 143-215.3;
Eff. February 1, 1976;
Amended Eff. July 1, 1988; March 1, 1985; September 1, 1984; April 20, 1978.

.0103 REGISTRATION

(a) Well Driller Registration:

(1) Every person, firm or corporation engaged in the business of drilling, boring, coring or constructing wells in any manner with the use of power machinery in the state shall register annually with the department.

(2) Registration shall be accomplished, during the period from January 1 to January 31 of each year, by completing and submitting to the department a registration application form provided by the department for this purpose.

(3) Upon receipt of a properly completed application form, the applicant will be issued a certificate of registration.

(b) Pump Installer Registration:

(1) All persons, firms, or corporations engaged in the business of installing or repairing pumps or other equipment in wells shall register bi-annually with the department.

(2) Registration shall be accomplished, during the period from April 1 to April 30 of every odd-numbered year, by completing and submitting to the department a registration form provided by the department for this purpose.

(3) Upon receipt of a properly completed application form, the applicant will be issued a certificate of registration.

History Note: Statutory Authority G.S. 87-87;
Eff. February 1, 1976;
Amended Eff. July 1, 1988; April 20, 1978.

.0104 PUMP INSTALLATION REGISTRATION

History Note: Statutory Authority G.S. 87-87;
Eff. February 1, 1976;

History Note: Statutory Authority G.S. 143-215.14; 143-215.15; Eff. February 1, 1976; Repealed Eff. April 20, 1978.

.0107 STANDARDS OF CONSTRUCTION: WATER-SUPPLY WELLS

(a) Location

(1) The well shall be located:

(A) In an area not generally subject to flooding. Areas which have a propensity for flooding include those with concave slope, alluvial or colluvial soils; gullies, depressions, and drainage ways;

(B) at a minimum horizontal distance of 50 feet from any water-tight sewage and liquid-waste collection facility (such as cast iron pipe) except in the case of wells intended for a single family dwelling where it is not feasible to obtain 50 feet separation between a well and a water-tight liquid-waste collection facility because of lot size or other fixed conditions, the horizontal separation distance shall be the maximum feasible distance, but in no case less than 25 feet; provided the sewer line is constructed of leak-proof pipe, such as cast iron pipe, with leaded or mechanical joints;

(C) at a minimum horizontal distance of 100 feet from any other sewage or liquid-waste collection any disposal facility (such as a septic tank and drain fields) and any other source of existing or potential pollution or contamination, except in the case of wells intended for a single family dwelling where it is not feasible to obtain 100 feet horizontal separation between a well and a source because of lot size or other fixed conditions, the separation distance shall be maximum feasible distance, but in no case less than 50 feet.

(2) Actual separation distances must conform with the more stringent of applicable federal, state and local requirements.

(3) Wells drilled for public water supply systems regulated by the Department of Human Resources shall meet the siting and all other requirements of that department.

(b) Drilling Fluids and Additives. Drilling Fluids and Additives shall be materials specified for use in water well construction and approved by the division.

(c) Casing

(1) If steel casing is used, then:

(A) The casing shall be new, seamless or electric-resistance welded galvanized or black steel pipe.

Galvanizing shall be done in accordance with requirements of ASTM A-120.

(B) The casing, threads and couplings shall meet or exceed the specifications of ASTM A-53, A-120 or A589.

(C) The minimum wall thickness for a given diameter shall equal or exceed that specified in Table 1.

TABLE 1: MINIMUM WALL THICKNESS FOR STEEL CASING:

Nominal Diameter (in.)	Wall Thickness (in.)
For 3-1/2" or smaller pipe, schedule 40 is required	
4	0.142
5	0.156
5-1/2	0.164
6	0.185
8	0.250
10	0.279
12	0.330
14 and larger	0.375

(D) stainless steel casing, threads, and couplings shall conform in specifications to the general requirements in ANSI/ASTM A-530 and also shall conform to the specific requirements in the ASTM standard that best describes the chemical makeup of the stainless steel casing that is intended for use in the construction of the well;

(E) stainless steel casing shall have a minimum wall thickness that is equivalent to standard schedule number 10S.

(2) If Thermoplastic Casing is used, then:

(A) the casing shall be new;

(B) the casing and joints shall meet or exceed all the specifications of ASTM F-480-81, except that the outside diameters will not be restricted to those listed in F-480;

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(C) the maximum depth of installation for a given SDR or Schedule number shall not exceed that listed in Table 2; 93.46

(D) The top of the casing shall be terminated by the drilling contractor at least twelve inches above land surface. 93.48

(3) In constructing any well, all water-bearing zones that are known to contain polluted, saline, or other non-potable water shall be adequately cased and cemented off so that pollution of the overlying and underlying groundwater zones will not occur. 93.51 93.52

(4) Every well shall be cased with the bottom of the casing extending to a minimum depth as follows: 93.54

(A) Wells located within the area described in Rule .0117 of this Subchapter shall be cased from land surface to a depth of at least 35 feet; 93.57

(B) Wells located within the area described in Rule .0116 of this Subchapter shall be cased from land surface to a depth of at least 10 feet; 94.2

(C) Wells located in any other area shall be cased from land surface to a depth of at least 20 feet. 94.3 94.4

(5) The top of the casing shall be terminated by the drilling contractor at least 12 inches above land surface. 94.6 94.7

(d) Grouting

(1) Casing shall be grouted to a minimum depth of twenty feet below land surface except that: 94.9 94.12

(A) In those areas designated by the director to meet the criteria of Rule .0116 of this Subchapter grout shall extend to a depth of two feet above the screen or, for open end wells, to the bottom of the casing, but in no case less than 10 feet. 94.15 94.16 94.17

(B) In those areas designated in Rule .0117 of this Subchapter, grout shall extend to a minimum of 35 feet below land surface. 94.18 94.19

(C) The casing shall be grouted as necessary to seal off all aquifers or zones with water of a poorer quality than that of the producing zone(s). 94.20 94.21 94.22

Maximum allowable depths (in feet) of Installation of Thermoplastic Water Well Casing 94.25 94.26

	Nominal Diameter												94.28
Schedule number-	2	2.5	3	3.5	4	5	6	8	10	12	14	16	94.29 94.30 94.31
Schedule 40-	485	635	415	315	253	180	130	85	65	65	50	50	94.32 94.33 94.34

Schedule 80-	1460	1685	1170	920	755	550	495	340	290	270	265	255
SDR Number	All Diameters											
SDR 41	20											
SDR 32.5	50											
SDR 27.5	80											
SDR 26	95											
SDR 21	185											
SDR 17	355											
SDR 13.5	735											

(2) Grout shall be placed around the casing by one of the following methods:

(A) Pressure. The annular space between the casing and the formation shall be a minimum of 1.5 inches. Grout shall be pumped or forced under pressure through the bottom of the casing until it fills the annular area around the casing and overflows at the surface.

(B) Pumping. The annular space between the casing and formation, shall be a minimum of 1.5 inches. Grout shall be pumped into place through a hose or pipe extended to the bottom of the annular space which can be raised as the grout is applied. The grout hose or pipe should remain submerged in grout during the entire application.

(C) Other. The annular space around the casing shall be a minimum of three inches. The annular space shall be completely filled with grout by any method that will insure completed filling of the space; provided the annular area does not contain water. If the annular area contains water it shall be dewatered or the grout shall be placed by either the pumping or pressures method.

(3) If an outer casing is installed, it shall be grouted by either the pumping or pressure method.

(4) All grout mixtures shall be prepared prior to emplacement.

(5) The well shall be grouted within five working days after the casing is set.

(6) No additives which will accelerate the process of hydration shall be used in grout for thermoplastic well casing.

(e) Well Screens

(1) The well, if constructed to obtain water from an unconsolidated rock formation, shall be equipped with a screen that will adequately prevent the entrance of formation material into the well after the well has been developed and completed by the well contractor.

(2) The well screen be of a design to permit the optimum development of the aquifer with minimum head loss consistent with the intended use of the well. The openings shall be designed to prevent clogging and shall be free of rough edges, irregularities or other defects that may accelerate or contribute to corrosion or clogging.

(3) Multi-screen wells shall not connect aquifers or zones which have differences:

(A) in water quality which would result in contamination of any aquifer or zone;

(B) in water levels that would result in depletion of water from any aquifer or zone or significant change in head in any aquifer or zone.

(f) Gravel-Packed Wells

(1) In constructing a gravel-packed well:

(A) The gravel shall be composed of quartz, granite, or similar rock material and shall be cleam, rounded, uniform, water-washed and free from clay, silt, or other deleterious material.

(B) The size of the gravel shall be determined from a grain size analysis of the formation material and should be compatible with the grain size of the aquifer.

(C) The gravel shall be placed in the annular space around the screens and casing by a fluid circulation method, preferably through a conductor pipe or insure accurate placement and avoid bridging.

(D) The gravel shall be adequately disinfected.

(E) For gravel packed wells in which an outer casing that is grouted its entire length does not extend to the top of the producing zone, a neat cement plug of at least 10 feet in vertical thickness shall be placed in the annular area between the inner casing and formation opposite the first clay above the top screen. The remaining space shall

be filled with grout, or clay except the upper 20 feet which shall be filled with grout.

(2) The gravel pack shall not connect aquifers or zones which have differences:

(A) In water quality that would result in deterioration of the water quality in any aquifer or zone;

(B) In water levels that would result in depletion of water from any aquifer or zone or significant change in head in any aquifer or zone.

(g) Large Diameter Wells

(1) A large diameter well cased with concrete pipe and commonly referred to as a "bored" well, may be constructed.

(2) If the casing joints are not sealed, the construction shall be as follows:

(A) The bore hole shall have a minimum diameter of six inches larger than the outside diameter of the casing.

(B) The annular space around the casing shall be filled with neat-cement, sand cement or concrete grout to a depth of at least 20 feet below land surface. The grout shall be placed in accordance with requirements of Rule .0107 (d)(3) of this Subchapter.

(C) The annular space around the casing below the grout shall be filled with sand or gravel.

(D) The gravel-pack material shall be composed of quartz, granite, or similar rock material and shall be clean, rounded, uniform, water-washed and free from clay, silt, or other deleterious material.

(E) The gravel shall be adequately disinfected.

(3) If the casing joints are sealed, the bore hole shall have a minimum diameter of six inches larger than the outside diameter of the casing to a depth of at least 20 feet below the land surface. The annular space around the casing shall be filled with neat or sand-cement grout to a depth of at least 20 feet below land surface.

(4) The well head shall be completed in the same manner as required for other water-supply wells.

(h) Well Development. All water supply wells shall be properly developed by the well driller. Development shall include removal of formation materials, mud, drilling fluids and additives. A total suspended solids concentrations of less than 5 milligrams per liter of formation materials is considered acceptable.

(i) Well Head Completion

(1) Every water supply well and such other wells as may be specified by the commission shall be equipped with a usable access port or air line. The access port shall be at least one half inch inside diameter opening so that the position of the water level can be determined at any time. Such port shall be installed and maintained in such manner as to prevent entrance of water or foreign material.

(2) Well Identification Plate

(A) An identification plate showing the drilling contractor and registration number shall be installed on the well within 24 hours after completion of the drilling.

(B) The identification plate shall be constructed of a durable weatherproof, rustproof metal or equivalent material.

(C) The identification plate shall be securely attached to the well casing or enclosure floor around the casing where it is readily visible.

(D) The identification plate shall not be removed from the well by any person.

(E) The identification tag shall be stamped with a permanent marking within 30 days of completion of drilling to show the:

(i) total depth of well;

(ii) casing depth (ft.) and inside diameter (in.);

(iii) screened intervals of screened wells;

(iv) gravel interval of gravel-packed wells;

(v) yield, in gallons per minute (gpm), or specific capacity in gallons per minute per foot of drawdown (gpm/ft.-dd);

(vi) static water level and date measured;

(vii) drilling contractor and registration number;

(viii) date well completed.

(3) Every artesian well that flows under natural artesian pressure shall be equipped with a valve so that the flow can be completely stopped. Well owners shall be responsible for the operation and maintenance of the valve.

(4) Pitless adapter units shall be allowed as a method of well head completion under the following conditions:

(A) the pitless adapter unit be of standard design and manufactured specifically for the purpose of well construction;

(B) the unit shall meet industry standards for strength and water tightness;

(C) the unit be compatible with the well casing;

(D) the unit be joined to the well casing be either a threaded coupling or welded joint;

(E) the top of the unit shall be at least 8 inches above land surface;
(F) the unit shall have an access port.

(5) All piping, wiring, and vents shall enter the well at least eight inches above land surface, except where pitless adapter units are used.

History Note: Statutory Authority G.S. 87-87; 87-88;
Eff. February 1, 1976;
Amended Eff. March 1, 1985; September 1, 1984;
April 20, 1978.

.0108 STANDARDS OF CONSTRUCTION: WELLS OTHER THAN WATER SUPPLY

(a) No well shall be located, constructed, operated, or repaired in any manner that may adversely impact the quality of groundwater. Any test holes and borings shall be permanently abandoned by the driller in accordance with Rule .0113 of this Section within two days after drilling or two days after testing is complete, whichever is least restrictive; except in the case that a test well is being converted to a production well, in which case conversion shall be completed within 30 days.

(b) Injection wells shall conform to the standards set forth in Section .0200 of this Subchapter.

(c) Monitoring wells and recovery wells shall be located, designed, constructed, operated and abandoned with materials and by methods which are compatible with the chemical and physical properties of the contaminants involved, specific site conditions and specific subsurface conditions. Specific construction standards will be itemized in the construction permit, but the following general requirements will apply:

(1) The borehole shall not penetrate to a depth greater than the depth to be monitored or the depth from which contaminants are to be recovered.

(2) The well shall not hydraulically connect separate aquifers.

(3) Construction materials shall be compatible with the contaminants to be monitored or recovered.

(4) The well shall be constructed in such a manner that water from the land surface cannot migrate into gravel pack or well screen area.

(5) When a gravel pack is placed around the screen, a seal shall be installed above the gravel.

(6) Grout shall be placed in the annular space between the casing and the borehole wall from land surface to a depth within two feet above the top of the well screen or to the bottom of the casing for open end wells.

(7) All wells shall be secured to reasonably insure against unauthorized access and use.

(8) All wells shall be afforded reasonable protection against damage during construction and use.

(9) Any wells which are flowing artesian wells shall be valved so that the flow can be regulated.

(10) Each well shall have permanently affixed an identification plate constructed of a durable material and shall contain the following information:

(A) drilling contractor name and registration number;

(B) date well completed;

(C) total depth of well;

(D) a warning that the well is not the water supply and that the groundwater may contain hazardous materials; and

(E) depth(s) to screen(s).

(d) Observation Wells.

(1) shall be cased as specified in .0107(c) of this Subchapter unless otherwise approved by the department.

(2) shall be grouted to within two feet of the well screens or, for open end wells, to the bottom of the casing unless otherwise approved by the department.

History Note: Statutory Authority G.S. 87-87; 87-88;
Eff. February 1, 1976;
Amended Eff. September 1, 1984; April 20, 1978.

.0109 PUMPS AND PUMPING EQUIPMENT

(a) The pumping capacity of the pump shall be consistent with the intended use and yield characteristics of the well.

(b) The pump and related equipment for the well shall be conveniently located to permit easy access and removal for repair and maintenance.

(c) The base plate of a pump placed directly over the well shall be designed to form a watertight seal with the well casing or pump foundation.

(d) In installations where the pump is not located directly over the well, the annular space between the casing and pump intake or discharge piping shall be closed with a watertight seal preferably designed specifically for this purpose.

(e) The well shall be properly vented at the well head to allow for the pressure changes within the well except when a suction lift type pump is used.

(f) A hose bibb shall be installed at the well head by the person installing the pump for obtaining water samples. In the case of offset jet pump installations the hose bibb shall be installed on the return (pressure) side of the jet pump piping.

(g) A priming tee shall be installed at the well head in conjunction with offset jet pump installations.

(h) Any suction line installed underground between the well and pump shall be surrounded by six inches of cement, or encased in a larger pipe that is sealed at each end.

(i) The drop piping and electrical wiring used in connection with the pump shall meet underwriters specifications acceptable to the department.

(j) Contaminated water shall not be used for priming the pump.

History Note: Statutory Authority G.S. 87-87; 87-88;
Eff. February 1, 1976;
Amended Eff. April 20, 1978.

.0110 WELL TESTS FOR YIELD

(a) Every water supply well shall be tested for capacity by a method and for a period of time acceptable to the department.

(b) The permittee may be required as a permit condition to test any well for capacity by a method stipulated in the permit.

(c) Standard methods for testing domestic well capacities include:

(1) Pump Method
- (A) select a permanent measuring point, such as the top of the casing;
- (B) measure and record the static water level below or above the measuring point prior to starting the pump;
- (C) measure and record the discharge rate at intervals of 10 minutes or less;
- (D) measure and record water levels using a steel or electric tape at intervals of 10 minutes or less;
- (E) continue the test for a period of at least one hour;
- (F) make measurements within an accuracy of plus or minus 0.25 of a foot.

(2) Bailer Method
- (A) select a permanent measuring point, such as the top of the casing;
- (B) measure and record the static water-level below or above the measuring point prior to starting the bailing procedure;
- (C) bail the water out of the well as rapidly as possible for a period of at least one hour; determine and record the bailing rate in gallons per minute at the end of the bailing period;
- (D) measure and record the water-level immediately after stopping bailing process.

(3) Air Rotary Drill Method
- (A) measure and record the amount of water being injected into the well during drilling operations;

(B) measure and record the discharge rate in gallons per minute at intervals of one hour or less during drilling operations;

(C) after completion of the drilling, continue to blow the water out of the well for at least 30 minutes and measure and record the discharge rate in gallons per minute at intervals of 10 minutes or less during the period;

(D) measure and record the water level immediately after discharge ceases.

(4) Air Lift Method

(A) Measurements shall be made through a pipe placed in the well;

(B) The pipe shall have a minimum inside diameter of at least five-tenths of an inch and shall extend from top of the well head to a point inside the well that is below the bottom of the air line;

(C) Measure and record the static water level prior to starting the air compressor;

(D) Measure and record the discharge rate at intervals of 10 minutes or less;

(E) Measure and record the pumping level using a steel or electric tape at intervals of 10 minutes or less;

(F) Continue the test for a period of at least one hour.

(d) Public, Industrial and Irrigation Wells. Every public, industrial and irrigation well upon completion, shall be tested for capacity by the drilling contractor (except when the owner specifies another agent) by the following or equivalent method:

(1) The water level in the well to be pumped and any observation wells shall be measured and recorded prior to starting the test.

(2) The well shall be tested by a pump of sufficient size and lift capacity to satisfactorily test the yield of the well, consistent with the well diameter and purpose.

(3) The pump shall be equipped with sufficient throttling devices to reduce the discharge rate to approximately 25 percent of the maximum capacity of the pump.

(4) The test shall be conducted for a period of at least 24 hours without interruption and shall be continued for a period of at least four hours after the pumping water level stabilizes (ceases to decline). When the total water requirements for wells other than public, community or municipal supply wells are less than 100,000 gpd, the well shall be tested for a period and in a manner to satisfactorily show the capacity of the

well, or that the capacity of the well is sufficient to meet the intended purpose.

(5) The pump discharge shall be set at a constant rate or rates that can be maintained throughout the testing period. If the well is tested at two or more pumping rates (a step-drawdown test), the pumping water level shall be stabilized for a period of at least four hours for each pumping rate.

(6) The pump discharge rate shall be measured by an orifice meter, flowmeter, weir, or equivalent metering device. The metering device shall have an accuracy within plus or minus five percent.

(7) The discharge rate of the pump and time shall be measured and recorded at intervals of 10 minutes or less during the first two hours of the pumping period for each pumping rate. If the pumping rate is relatively constant after the first two hours of pumping, discharge measurements and recording may be made at longer time intervals but not to exceed one hour.

(8) The water level in each well and time shall be measured and recorded at intervals of five minutes or less during the first hour of pumping and at intervals of 10 minutes or less during the second hour of pumping. After the second hour of pumping, the water level in each well shall be measured at such intervals that the lowering of the pumping water level does not exceed 0.25 of a foot or three inches between measurements.

(9) A reference point for water-level measurements (preferably the top of the casing) shall be selected and recorded for the pumping well and each observation well to be measured during the test. All water level measurements shall be made from the selected reference points.

(10) All water-level measurements shall be made with a steel or electric tape or equivalent measuring device.

(11) All water-level measurements shall be made within an accuracy of plus or minus 0.25 of a foot or three inches.

(12) After the completion of the pumping period, measurements of the water-level recovery rate, in the pumped well, shall be made for a period of at least two hours in the same manner as the drawdown.

History Note: Statutory Authority G.S. 87-87; 87-88;
Eff. February 1, 1976;
Amended Eff. September 1, 1984; April 20, 1978.

.0111 CHLORINATION OF WATER SUPPLY WELLS

USGS-COMP-12.05-01/01/88

All water supply wells shall be disinfected upon completion of construction, maintenance, repairs, pump installation and testing as follows:

(1) Chlorine shall be placed in the well in sufficient quantities to produce a chlorine residual of at least 100 parts per million (ppm) in the well. A chlorine solution may be prepared by dissolving high test calcium hypochlorite (trade names include HTH, Chlor-Tabs, etc.) in water. About 0.12 lbs. or two ounces of hypochlorite containing 70 percent available chlorine is needed per 100 gallons of water for 100 ppm chlorine residual. As an example, a well having a diameter of six inches, has a volume of about one and five-tenths gallons per foot. If the well has 200 feet of water, the minimum amount of hypochlorite required would be 0.36 lbs. (1.5 x 200 feet = 300 gallons, 0.12 lbs. per 100 gallons, 0.12 x 3 = 0.36 lbs.)

(2) The chlorine shall be placed in the well by one of the following or equivalent methods:

(a) Chlorine tablets may be dropped in the top of the well and allowed to settle to the bottom.

(b) Chlorine solutions shall be placed in the bottom of the well by using a bailer or by pouring the solution through the drill rod, hose, or pipe placed in the bottom of the well. The solution shall be flushed out of the drill rod, hose, or pipe by using water or air.

(3) Agitate the water in the well to insure thorough dispersion of the chlorine.

(4) The well casing, pump columm and any other equipment above the water level in the well shall be thoroughly rinsed with the chlorine as a part of the disinfecting process.

(5) The chlorine shall stand in the well for a period of at least 24 hours.

(6) The well shall be pumped until the system is clear of the chlorine before the system is placed in use.

(7) A sample of the water should be analyzed and found safe for human consumption.

History Note: Statutory Authority G.S. 87-87; 87-88;
Eff. February 1, 1976;
Amended Eff. July 1, 1988; September 1, 1984.

.0112 WELL MAINTENANCE: REPAIR: GROUNDWATER RESOURCES

(a) Every well shall be maintained in a condition whereby it will conserve and protect the ground water resources, and whereby it will not be a source or channel of contamination or pollution to the water supply or any aquifer.

All water supply wells shall be disinfected upon completion of construction, maintenance, repairs, pump installation and testing as follows:

(1) Chlorine shall be placed in the well in sufficient quantities to produce a chlorine residual of at least 100 parts per million (ppm) in the well. A chlorine solution may be prepared by dissolving high test calcium hypochlorite (trade names include HTH, Chlor-Tabs, etc.) in water. About 0.12 lbs. or two ounces of hypochlorite containing 70 percent available chlorine is needed per 100 gallons of water for 100 ppm chlorine residual. As an example, a well having a diameter of six inches, has a volume of about one and five-tenths gallons per foot. If the well has 200 feet of water, the minimum amount of hypochlorite required would be 0.36 lbs. (1.5 x 200 feet = 300 gallons, 0.12 lbs. per 100 gallons, 0.12 x 3 = 0.36 lbs.)

(2) The chlorine shall be placed in the well by one of the following or equivalent methods:

(a) Chlorine tablets may be dropped in the top of the well and allowed to settle to the bottom.

(b) Chlorine solutions shall be placed in the bottom of the well by using a bailer or by pouring the solution through the drill rod, hose, or pipe placed in the bottom of the well. The solution shall be flushed out of the drill rod, hose, or pipe by using water or air.

(3) Agitate the water in the well to insure thorough dispersion of the chlorine.

(4) The well casing, pump column and any other equipment above the water level in the well shall be thoroughly rinsed with the chlorine as a part of the disinfecting process.

(5) The chlorine shall stand in the well for a period of at least 24 hours.

(6) The well shall be pumped until the system is clear of the chlorine before the system is placed in use.

(7) A sample of the water should be analyzed and found safe for human consumption.

History Note: Statutory Authority G.S. 87-87; 87-88;
Eff. February 1, 1976;
Amended Eff. July 1, 1988; September 1, 1984.

.0112 WELL MAINTENANCE: REPAIR: GROUNDWATER RESOURCES

(a) Every well shall be maintained in a condition whereby it will conserve and protect the ground water resources, and whereby it will not be a source or channel of contamination or pollution to the water supply or any aquifer.

(b) All materials used in the maintenance, replacement, or repair of any well shall meet the requirements for new installation.

(c) Broken, punctured or otherwise defective or unserviceable casing, screens, fixtures, seals, or any part of the well head shall be repaired or replaced, or the well shall be properly abandoned.

(d) National Science Foundation (NSF) approved PVC pipe rated at 160 PSI may be used for liner casing. The annular space around the liner casing shall be at least five-eighths inches and shall be completely filled with neat-cement grout.

History Note: Statutory Authority G.S. 87-87; 87-88;
Eff. February 1, 1976;
Amended Eff. September 1, 1984.

.0113 ABANDONMENT OF WELLS

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

(1) Procedures for temporary abandonment of 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 casing and installed so that it cannot be removed easily by hand.

(B) The well shall be maintained whereby it is not a source or channel or contamination during temporary abandonment.

(C) Every temporarily abandoned well shall be protected with a casing.

(2) Procedures for permanent abandonment of 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 Rule .0107 Paragraph (d) 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) The well shall be thoroughly disinfected prior to sealing.

(D) 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.

(E) "Bored" wells shall be completely filled with cement grout, dry clay or material excavated during drilling of the well and then compacted in place.

(F) Wells constructed in unconsolidated formations other than "bored" wells shall be completely dilled with cement grout by introducing it through a pipe extending to the bottom of the well which can be raised as the well is filled.

(G) Wells constructed in consolidated rock formations or that penetrate zones of consolidated rock may be filled with cement, sand, gravel or drill cuttings opposite the zones of consolidated rock. The top of the sand, gravel or cutting fill shall be at least five feet below the top of the consolidated rock. The remainder of the well shall be filled with cement grout only.

(H) Test wells less than 20 feet in depth which do not penetrate the water table shall be abandoned in such manner as to prevent the well from being a channel allowing the vertical movement of water or a source of contamination to the groundwater supply. Test wells or borings that penetrate the water table shall be abandoned by completely filling with cement grout.

(b) Any well which acts as a source or channel of contamination shall be repaired or permanently abandoned within 30 days or receipt of notice from the department.

(c) The drilling contractor shall permanently abandon any well in which the casing has not been installed or from which the casing has been removed, prior to removing his equipment from the site.

(d) The owner shall be responsible for permanent abandonment of a well except:

(1) As otherwise specified in these Regulations; or

(2) If well abandonment is required because the driller improperly locates, constructs, or completes the well.

History Note: Statutory Authority G.S. 87-87; 87-88;
Eff. February 1, 1976;
Amended Eff. September 1, 1984; April 20, 1978.

.0114 DATA AND RECORDS REQUIRED

(a) Well Cuttings

(1) Samples of formation cuttings shall be collected and furnished to the department from all wells when such samples are requested by the department.

(2) Samples or representatives cuttings shall be obtained for depth intervals of 10 feet or less beginning at the land surface. Representative cuttings shall also be collected at depths of each significant change in formation.

(3) Samples of cuttings shall be placed in containers furnished by the department and such containers shall be filled, sealed and properly labeled with indelible-type markers, showing the well owner, well number if applicable, and depth interval the sample represents.

(4) Each set of samples shall be placed in a suitable container(s) showing the location, owner, well number if applicable, driller, depth interval, and date.

(5) Samples shall be retained by the driller until delivery instructions are received from the department or for a period of at least 60 days after the well record form (GW-1), indicating said samples are available, has been received by the department.

(6) The furnishing of samples to any person or agency other than the department shall not constitute compliance with the department's request and shall not relieve the driller of his obligation to the department.

(b) Reports

(1) Any person completing or abandoning any well shall submit a record of the construction or abandonment on forms provided by the department. The record shall include certification that construction or abandonment was completed as required by these Regulations, the owner's name and address, well location, diameter, depth, yield, and any other information the department may reasonably require.

(2) The certified record of completion or abandonment shall be submitted to the department within a period of thirty days after completion or abandonment.

History Note: Statutory Authority G.S. 87-87; 87-88;
Eff. February 1, 1976;
Amended Eff. September 1, 1984; April 20, 1978.

.0115 DIAGRAMS AND FORMS

History Note: Statutory Authority G.S. 87-87;
Eff. February 1, 1976;
Amended Eff. April 20, 1978;
Repealed Eff. September 1, 1984.

.0116 DESIGNATED AREAS: WELLS CASED TO LESS THAN 20 FEET

OLD COPY 12/3 07/01/88

(a) In some areas the best or only source of potable water supply exists between ten and twenty feet below the surface of the land. In consideration of this, the director may designate areas of the state where wells may be case to a depth less than twenty feet. To make this determination, the director will find:

(1) that the only or best source of drinking water exists between a depth of ten and twenty feet below the surface of the land;

(2) that utilization of said source of water is in the best interest of the public.

(b) The following areas are so designated:

(1) in Currituck County on Terres Quarter Island and in an area between the sound and a line beginning at the end of SR 1130 near Currituck Sound, thence north to the end of SR 1133, thence north to the end of NC 3 at the intersection with the sound;

(2) on the Outer Banks from the northern corporate limit of Nags Head on Bodie Island, south to Ocracoke Inlet;

(3) all areas lying between the Intercoastal Waterway and the ocean from New River Inlet south to New Topsail Inlet;

(4) all areas lying between the Intercoastal Waterway and the ocean from the Cape Fear River south to the South Carolina line.

(c) In all other areas, the source of water shall be at least 20 feet below land surface, except when adequate quantities of potable water cannot be obtained below a depth of twenty feet, and at sites not within areas designated in Subparagraph (b) of this Rule the source of water may be obtained from unconsolidated rock formations at depths less than twenty feet provided that:

(1) the well driller can show to the satisfaction of the department, that sufficient water of acceptable quality is not available to a minimum depth of fifty feet; and

(2) the proposed source of water is the maximum feasible depth above fifty feet, but in no case less than ten feet.

(3) the regional or central office of the department shall be notified prior to the construction of a well obtaining water from a depth between 10 and 20 feet below land surface.

History Note: Statutory Authority G.S. 87-87;
Eff. April 20, 1978;
Amended Eff. July 1, 1988; September 1, 1984.

.0117 DESIGNATED AREAS: WELLS CASED TO MINIMUM DEPTH OF 35 FEET

(a) Wells drilled in areas underlain by metavolcanic rocks identified on the 1958 State Geologic Map as bedded argillites of

the Carolina Slate Belt shall be cased to a minimum depth of 35 feet. These areas are generally described as follows:

(1) Anson County generally west of a line beginning at the intersection of the runs of the Pee Dee River and Buffalo Creek, thence generally northeast to SR 1627, thence generally south along SR 1627 to the intersection with SR 1632, thence generally west along SR 1632 to the intersection with US 52, thence generally south along US 52 to the intersection with SR 1418, thence generally southwest along SR 1418 to the intersection of US 74, thence generally west along US 74 to the intersection of SR 1251, thence generally southwest along SR 1251 to the intersection with SR 1240, thence generally southeast along SR 1240 to the intersection with SR 1252, thence generally south along SR 1252 to the intersection with SR 1003, thence generally southeast along SR 1003 to the intersection with SR 1228, thence generally southwest along SR 1228 to the Union County line;

(2) Cabarrus County generally west of a line beginning at the intersection of SR 1121 and the Mecklenburg County line, thence generally northeast along SR 1121 to the intersection with SR 1123, thence generally northeast along SR 1123 to the intersection with SR 1145, thence generally northeast along SR 1145 to the intersection with SR 1143, thence generally east along SR 1143 to the intersection with US 601, thence generally southeast along US 601 to the intersection of SR 1006, thence generally northeast along SR 1006 to the intersection with NC 49, thence generally northeast along NC 49 to the intersection with SR 2444, thence generally northeast along SR 2444 to the intersection with the Rowan County line;

(3) Davidson County generally east of a line starting at the intersection of the runs of Abbotts Creek and the Yadkin River in High Rock Lake, thence generally north along Abbotts Creek to SR 2294 bridge, thence generally northeast along SR 2294 to the intersection of SR 2380, thence generally north along SR 2380 to the intersection of SR 2248, thence generally north along SR 2248 to the intersection of SR 2256, thence generally east along SR 2256 to the intersection of SR 2205, thence generally east along SR 2205 to the Randolph County line;

(4) Montgomery County generally west of a line beginning at the intersection of SR 1134 with the Randolph County line, thence generally south along SR 1134 to the intersection with SR 1303, thence generally south along SR 1303 to the intersection with NC 109, thence

generally southeast along NC 109 to the intersection with SR 1150, thence generally south along SR 1150 to the intersection with NC 24 and NC 27, thence generally east along NC 24 and NC 27 to the intersection with SR 1134, thence generally southeast along SR 1134 to the intersection with NC 109, thence generally south along NC 109 to the intersection with SR 1546, thence generally southeast along SR 1546 to the intersection with SR 1118, thence generally south along SR 1118 to the intersection with the Richmond County line;

(5) Randolph County generally west of a line beginning at the intersection of SR 1344 with the Davidson County line, thence generally northeast along SR 1344 to the intersection of US 64, thence generally southeast along US 64 to the intersection with SR 1318, thence generally south along SR 1318 to the intersection with 1193, thence generally east along SR 1193 to the intersection with SR 1107, thence generally south along SR 1107 to the intersection with SR 1105, thence southeast along SR 1105 to the intersection with the Montgomery County line;

(6) Rowan County generally east of a line beginning at the intersection of SR 2352 with the Cabarrus County line, thence north along SR 2352 to the intersection with SR 2350, thence generally northwest along SR 2350 to the intersection with SR 2351, thence generally north along SR 2351 to the intersection with US 52, thence generally northwest along US 52 to the intersection with SR 2140, thence generally north along SR 2140 to the intersection with Reedy Creek, thence generally northeast along Reedy Creek to the intersection with the run of the Yadkin River in High Rock Lake;

(7) Union County generally east of a line beginning at the intersection of NC 16 with the South Carolina-North Carolina State line, thence generally north along NC 16 to the intersection with SR 1315, thence generally east along SR 1315 to the intersection with SR 1341, thence generally north along SR 1341 to the intersection with SR 1347, thence generally north along SR 1347 to the intersection with SR 1338, thence north along SR 1338 to the intersection with SR 1344, thence generally north along SR 1344 to the intersection with the Mecklenburg County line;

(8) Stanly County--all.

(b) The roads describing the boundaries of the designated areas do not necessarily coincide with the rock unit boundaries. Therefore, any well drilled within 400 feet of a road described as a boundary of a designated area shall be cased to the same minimum depth as those within the described area.

History Note: Statutory Authority G.S. 87-87;
Eff. April 20, 1978.

.0118 VARIANCE

The director may grant a variance from any construction standard under the rules of this Section. Any variance will be in writing, and may be granted upon oral or written application to the director, by the person responsible for the construction of the well for which the variance is sought, if the director finds facts to support the following conclusions:

(1) that the use of the well will not endanger human health and welfare or the groundwater;

(2) that construction in accordance with the standards was not technically feasible in such a manner as to afford a reasonable water supply at a reasonable cost.

The director may require the variance applicant to submit such information as he deems necessary to make a decision to grant or deny the variance. The director may impose such conditions on a variance or the use of a well for which a variance is granted as he deems necessary to protect human health and welfare and the groundwater resources. The findings of fact supporting any variance under this Rule shall be in writing and made part of the variance.

The denial of a variance, or the granting of a variance with conditions, does not create a contested case within the meaning of the North Carolina Administrative Procedure Act.

History Note: Statutory Authority G.S. 87-87; 87-88;
Eff. April 20, 1978;
Amended Eff. September 1, 1984.

.0119 DELEGATION

(a) The director is delegated the authority to grant permission for well construction under G.S. 87-87.

(b) The director is delegated the authority to give notices and sign orders for violations under G.S. 87-91.

(c) The director is delegated the authority to request the Attorney General to institute civil actions under G.S. 87-95.

History Note: Statutory Authority G.S. 143-215.3(a)(1);
Eff. March 1, 1985.

DOC. NO.: EHEN - 0006 11-12-03-04/01/96

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL MANAGEMENT

ADMINISTRATIVE CODE SECTION:
15A NCAC 2H .0500
Water Quality Certification

Amended Effective July 1, 1988
Reprinted : April 1, 1990

Environmental Management Commission
Raleigh, North Carolina

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL MANAGEMENT

ADMINISTRATIVE CODE SECTION:
15A NCAC 2B .0500-Surface Water Monitoring: Reporting

Amended Effective December 1, 1984
Reprinted: October 1, 1990

Environmental Management
Commission Raleigh, North Carolina

SECTION .0400 - EFFLUENT LIMITATIONS

.0401 PURPOSE

History Note: Statutory Authority G.S. 143-215; 143-215.1; 143-215.3(a)(1);
Eff. February 1, 1976;
Repealed Eff. December 1, 1984.

.0402 SCOPE

Effluent limits established herein shall apply to all effluents discharged from pretreatment facilities and from outlets and point sources to the waters of the state.

History Note: Statutory Authority G.S. 143-215; 143-215.1; 143-215.3(a)(1);
Eff. February 1, 1976.

.0403 DEFINITION OF TERMS

The terms used in this Section shall be as defined in G.S. 143-213 and as follows:

(1) The term "commission" means the Environmental Management Commission or its successor.

(2) The term "director" means the Director of the Division of Environmental Management, Department of Natural Resources and Community Development.

(3) The term "staff" means the division of environmental management, or its successor.

(4) The term "BPCTCA" shall mean best practicable control technology currently available. Effluent limitations determined as BPCTCA are immediately applicable and shall be complied with not later than July 1, 1977.

(5) The term "BPWTT" shall mean best practicable waste treatment technology. Effluent limitations established by this designation shall be complied with not later than July 1, 1983.

(6) The term "BCT" shall mean best conventional pollutant control technology. Effluent limitations designated as BCT will control the discharge of pollutants determined to be conventional in nature and these limitations shall be complied with not later than July 1, 1984.

(7) The term "BAT" shall mean best available technology economically achievable. Effluent limitations designated as BAT will control the discharge of pollutants determined to be nonconventional in nature and these limitations will come into effect on July 1, 1984, and shall be complied with not later than July 1, 1987.

(8) The term "BAT/BMP'S" shall mean best available technology economically achievable/best management practices. Effluent limitations designated as BAT/BMP's will control the discharge of pollutants determined to be toxic in nature. Compliance with these designated effluent limitations must be maintained not later than three years after such limitations are developed, or not later than July 1, 1984, whichever is later, but in no case later than July 1, 1987.

(9) The term "new source performance standards" shall mean the effluent limitations required of an industrial discharger determined under the guidance of 15A NCAC 2B .0407 to be a new source.

(10) The term "waste stabilization pond" (also called "lagoons" or "oxidation ponds") shall mean a large, relatively shallow basin designed for long term detention of wastewater which may or may not have received prior treatment. While in the basin, the wastewater is biologically treated to reduce biochemical oxygen demand and suspended solids. Stabilization ponds are further defined as:

(a) Photosynthetic Pond. A pond which is designed to rely on photosynthetic oxygenation (i.e., oxygen from algae) for any portion of the oxygen needed for waste treatment; This includes oxidation ponds and facultative lagoons. These ponds may have supplemental aeration by mechanical means. With regard to hydraulic flow, photosynthetic ponds are either of the:

(i) flow-through type, in which the pond discharges relatively continuously throughout the year; or

(ii) controlled-discharge type, in which the pond is designed to retain the wastewater without discharge from six months to one year, followed by controlled discharge over a short time interval (typically about one to three weeks);

(b) Aerated Pond. A pond which is not designed to rely on any photosynthetic oxygenation to provide oxygen needed for biological waste treatment; Air is supplied by mechanical means. Aerated ponds are either:

-12.03-04/01/96

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT

ADMINISTRATIVE CODE SECTION:

15A NCAC 2B .0100 - Procedures for Assignment of Water Quality Standards

15A NCAC 2B .0200 - Classifications and Water Quality Standards Applicable to Surface Waters of North Carolina

Effective January 1, 1990

Environmental Management Commission
Raleigh, North Carolina

North Carolina

Solid Waste Management Rules

15A NCAC 13B

Prepared by the
Department of Environment, Health, and Natural Resources
Solid Waste Management Division
Solid Waste Section

As Amended Through March 1, 1991

The form of this rule may be revised by the Attorney General pursuant to the provisions of G.S. 150B-61

Reduce ♦ Reuse ♦ Recycle

NORTH CAROLINA ADMINISTRATIVE CODE

TITLE 15

DEPARTMENT OF ENVIRONMENT, HEALTH & NATURAL RESOURCES

DIVISION OF ENVIRONMENTAL MANAGEMENT

SUBCHAPTER 2L

CLASSIFICATIONS AND WATER QUALITY STANDARDS APPLICABLE TO THE GROUNDWATERS OF NORTH CAROLINA

SECTION .0100, .0200 AND .0300

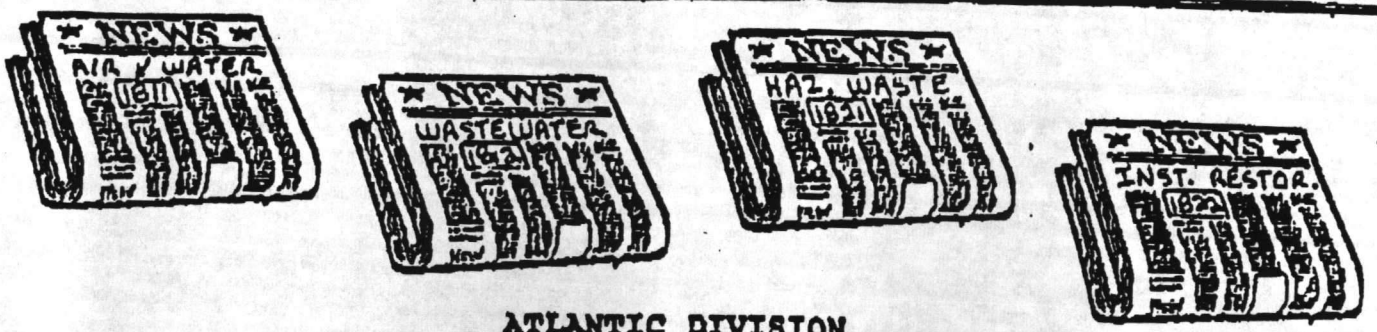
CURRENT THROUGH AUGUST 1, 1989

ENVIRONMENTAL MANAGEMENT COMMISSION

RALEIGH, NORTH CAROLINA

GW

DOC. NO.: CLEJ-00556-12.03-08/13/91



ATLANTIC DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
NORFOLK, VIRGINIA 23511-6287

8/13/91

FACSIMILE TRANSMISSION COVER SHEET

****

NUMBER OF PAGES INCLUDING COVER SHEET 42

TO:

AGENCY MCB CAMP LEJEUNE

NAME STEPHANY DEL RE JOHNSON CODE

FAX NUMBER (919) 451-5068

FROM:

LANTNAVFACENGCOM ENVIRONMENTAL QUALITY DIVISION

NAME LAURIE BOUCHER CODE 1822

TELEPHONE (804) 445- 1814 AUTOVON 565- 1814

****

CODE 18'S FAX NUMBERS: COMMERCIAL (804) 445-6662
AUTOVON 565-6662

****

REMARKS:

Subj: North Carolina DSMOA

I'm faxing you a copy of the "Defense and State Memorandum of Agreement/Cooperative Agreement Application" submitted by the State of North Carolina. I received this only 10 minutes ago along with a letter from NAVFAC requesting LANTDIV comments be received in their office no later than 8/15 (this Thursday). In the event that MCB Camp Lejeune would like to comment on this document, I'm sending you a copy. I know it's short notice, but unfortunately I just received it. NAVFAC cannot extend the comment period since their letter is due to the State of North Carolina the following day. Do what you can and I'll incorporate any MCB Camp Lejeune comments that I receive by noon Thursday,
8/15

DOC NO: CLEJ-00556-12.03-08/13/91

APPLICATION

FOR

DEPARTMENT OF DEFENSE

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM

COOPERATIVE AGREEMENT

REPRODUCED AT GOVERNMENT EXPENSE

DOC NO: CLEJ - 00556 - 12.03
08/13/91

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REPRODUCED AT GOVERNMENT EXPENSE

DOC NO: CLEJ - 00556 - 12.03 - 08/13/91

NORTH CAROLINA

DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES

WILLIAM W. COBEY, JR.

SECRETARY

DIVISION OF SOLID WASTE MANAGEMENT

WILLIAM L. MEYER

DIRECTOR

SUPERFUND SECTION

LEE CROSBY

CHIEF

REPRODUCED AT GOVERNMENT EXPENSE

Doc No: CLEJ-00556-12.0
08/13/91

PART I

GENERAL SUMMARY INFORMATION

A. US EPA Standard Form 424

State and Local Nonconstruction Programs

REPRODUCED AT GOVERNMENT EXPENSE

APPLICATION FOR FEDERAL ASSISTANCE

1. TYPE OF SUBMISSION: Application ☐ Construction ☐ Non-Construction; Preapplication ☐ Construction ☐ Non-Construction	2. DATE SUBMITTED	Applicant Identifier
	3. DATE RECEIVED BY STATE	State Application Identifier
	4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier

5. APPLICANT INFORMATION

Legal Name: Department of Environment, Health, and Natural Resources

Organizational Unit: Superfund Section

Address (give city, county, state, and zip code): Post Office Box 27687, Raleigh, NC 27611-7687

Name and telephone number of the person to be contacted on matters involving this application (give area code): Lee Crosby, 919/733-2801

6. EMPLOYER IDENTIFICATION NUMBER (EIN): 56-1386284

7. TYPE OF APPLICANT: (enter appropriate letter in box) [A]

A. State; B. County; C. Municipal; D. Township; E. Interstate; F. Intermunicipal; G. Special District; H. Independent School Dist.; I. State Controlled Institution of Higher Learning; J. Private University; K. Indian Tribe; L. Individual; M. Profit Organization; N. Other (Specify): _____

8. TYPE OF APPLICATION:

☒ New ☐ Continuation ☐ Revision

If Revision, enter appropriate letter(s) in box(es): ☐ ☐

A. Increase Award; B. Decrease Award; C. Increase Duration; D. Decrease Duration; Other (specify):

9. NAME OF FEDERAL AGENCY: Department of Defense (DoD)

10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 12.113

TITLE: 10 USC Section 2701

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Technical Review and Services for Defense Environment Restoration Program (DERP) Activities at active DoD facilities

12. AREAS AFFECTED BY PROJECT (cities, counties, states, etc.): Onslow

13. PROPOSED PROJECT: Start Date	Ending Date	14. CONGRESSIONAL DISTRICTS OF: a. Applicant	b. Project
8/1/91	7/31/93	4th	3rd

15. ESTIMATED FUNDING:		
a. Federal	$ 145,900	.00
b. Applicant	$	.00
c. State	$ -0-	.00
d. Local	$	.00
e. Other	$	.00
f. Program Income	$	.00
g. TOTAL	$ 145,900	.00

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE 1991

b. NO ☐ PROGRAM IS NOT COVERED BY E.O. 12372

☐ OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?

☐ Yes If "Yes," attach an explanation. ☒ No

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED

a. Typed Name of Authorized Representative	b. Title	c. Telephone number
William W. Cobey, Jr.	Secretary	919/733-4984

d. Signature of Authorized Representative: ERNEST A. CARL, DEPUTY SECRETARY

e. Date Signed: 7/12/91

Previous Editions Not Usable

Standard Form 424 (REV 3-88)
Prescribed by OMB Circular A-102

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REPRODUCED AT GOVERNMENT EXPENSE

PART II

BUDGET INFORMATION

A. Section A. - Budget Summary
(OMB No. 0348-0044/ EPA Standard Form 424A)

B. Section B. - Budget Categories
(OMB No. 0348-0044/ EPA Standard Form 424A)

C. Section D. - Forecasted Cash Needs
(EPA Standard Form 424A)

D. Section E. - Budget Estimates of Federal Funds Needed
(EPA Standard Form 424A)

E. Section F. - Other Budget Information
(EPA Standard Form 424A)

F. Assurances - Non-Construction Programs
(EPA Standard Form 424B)

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REPRODUCED AT GOVERNMENT EXPENSE

BUDGET INFORMATION — Non-Construction Programs

OMB Approval No. 0348-0044

SECTION A – BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. DERP	10 U.S.C. ss2701	$	$	$ 145,900	$ -0-	$ 145,900
2.						
3.						
5. TOTALS		$	$	$ 145,900	$ -0-	$ 145,900

SECTION B – BUDGET CATEGORIES

6 Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY				Total
	(1) Year 1	(2) Year 2	(3)	(4)	(5)
a. Personnel	$ 39,000	$ 42,000	$	$	$ 81,000
b. Fringe Benefits	9,377	9,959			19,336
c. Travel	6,212	6,809			13,021
d. Equipment	4,500	-0-			4,500
e. Supplies	1,400	1,600			3,000
f. Contractual	250	250			500
g. Construction	-0-	-0-			-0-
h. Other	1,119	906			2,025
i. Total Direct Charges (sum of 6a - 6h)	61,858	61,524			123,382
j. Indirect Charges	10,842	11,676			22,518
k. TOTALS (sum of 6i and 6j)	$ 72,700	$ 73,200	$	$	$ 145,900
7. Program In	$	$	$	$	$

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SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS
	$	$	$	$
TOTALS (sum of lines 8 and 11)	$	$	$	$

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
Federal	$ 72,000	$ 18,175	$ 18,175	$ 18,175	$ 18,175
NonFederal					
TOTAL (sum of lines 13 and 14)	$ 72,000	$ 18,175	$ 18,175	$ 18,175	$ 18,175

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (Years) (b) First	(c) Second	(d) Third	(e) Fourth
DERP	$ 72,700	$ 73,200	$	$
TOTALS (sum of lines 16 -19)	$ 72,700	$ 73,200	$	$

SECTION F - OTHER BUDGET INFORMATION

(Attach additional Sheets if Necessary)

21. Direct Charges:

22. Indirect Charges:
27.8%, $81,000, $22,518

23. Remarks

Standard for Local Reproduction

DOC NO: CLES - 00556 - 12.03 - 08/13/91

OMB Approval No. 0348-0040

ASSURANCES — NON-CONSTRUCTION PROGRAMS

Note: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant I certify that the applicant:

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.

2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§ 4728-4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).

6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§ 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C.§§ 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§ 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

8. Will comply with the provisions of the Hatch Act (5 U.S.C. §§ 1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§ 276a to 276a-7), the Copeland Act (40 U.S.C. § 276c and 18 U.S.C. §§ 874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§ 327-333), regarding labor standards for federally assisted construction subagreements.

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10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program andto purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.

11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§ 1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clear Air Act of 1955, as amended (42 U.S.C. § 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).

12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§ 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a-1 et seq.).

14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.

15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. 2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.

16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§ 4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.

17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984.

18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

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SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	TITLE
William W. Cobey, Jr. ERNEST A. CARR, DEPUTY SECRETARY	Secretary
APPLICANT ORGANIZATION	DATE SUBMITTED
Department of Environment, Health, and Natural Resources	7/12/91

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PART III

COST ANALYSIS BY INSTALLATION

A. Cost Basis By Installation

B. Distribution of Current CA Cost By Category

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STATE COOPERATIVE AGREEMENT FUNDING (SCAF) PROGRAM
COST BASIS BY INSTALLATION

INSTALLATION OR NPL SITE NAME	CLEANUP PHASE OR STAGE	NUMBER OF SITES	ON NPL? (Y/N)	IAG? (Y/N)	ESTIMATED END DATE	ESTIMATED TOTAL CLEANUP COST	ESTIMATED COST FOR STATE SERVICES				
							TOTAL COST	PRIOR YEARS' COST	PROJECTED EXPENDITURES		OUTYEARS' COST
									1ST YEAR	2ND YEAR	
Camp Lejeune MCB	RI/FS	34	Y	Y	2015	51,207,500	510,900	5,000	72,700	73,200	360,000
TOTALS											

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DISTRIBUTION OF PROJECTED TOTAL COSTS BY CATEGORY

INSTALLATION NAME	TECHNICAL REVIEW COMMENTS & RECOMMENDATIONS	APPLICABLE RELEVANT APPROPRIATE REQUIREMENTS (ARAR)	SITE VISIT	COMMUNITY RELATIONS	TECHNICAL REVIEW COMMITTEE	TOTAL (100%)
Camp Lejeune MCB	40%	5%	25%	5%	25%	100%

Doc No: CLEJ-0053
12.03 - 08/13/91

PART IV

PROJECT SUMMARY

A. Installation Background/Status

B. Implementation Plan

C. Organizational Chart

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A. NARRATIVE SUMMARY - CAMP LEJEUNE MILITARY RESERVATION

SITE DESCRIPTION

Camp Lejeune Military Reservation, a U.S. Marine Corps Base established in 1941, covers 170 square miles in Onslow County. The complex has a number of facilities, including the Marine Corps Air Station New River, which was established in 1951 and adjoins the base. The main functions of the base are to provide housing, training, logistical, and administrative support for Fleet Marine Force Units. The Navy has identified 77 potential waste disposal areas in Camp LeJeune and has designated 23 as posing a potential threat to public health and the environment. The Navy has detected pesticides in the soil and various contaminants in the groundwater. Several on-base drinking water wells have been closed. Approximately 13,800 people obtain drinking water from wells within 3 miles of the contamination on the site, with the nearest well being 3,500 feet away from one of the areas of contamination. Groundwater is the sole source of drinking waster for the base and the surrounding communities. Surface water from the base drains into the Atlantic Ocean via the New River. Both bodies of water are used for fishing and recreational activities.

Groundwater samples collected during 1985, from several wells along the northwestern perimeter of Hadnot Point Industrial Area (HPIA), revealed high concentration of contamination from VOCs. The wells were removed from further use at that time. Contamination was caused by solvent disposal in the HPIA.

During January 1989, EPA and NC Division of Solid Waste Management representatives conducted a RCRA Facility Assessment (RFA) to identify potential SWMUs on the Reservation. In addition to the 23 sites previously identified by the initial assessment study, the RFA recommended 7 additional SWMUs requiring further investigation.

On March 22, 1989, the National Oceanic and Atmospheric Administration (NOAA), as a natural resource trustee, determined the Reservation to represent a potential threat to natural resources held in trust by Federal agencies.

On October 4, 1989, the Reservation was finalized on the NPL (proposed June 24, 1988).

REMEDIAL WORK SCHEDULE

A complete round of soil sampling, groundwater monitor well construction and sampling, and surface water sampling has just been completed and the reports of results are expected in July 1991.

All work as yet proposed is tentative, the first document required under the Federal Facility Agreement will be the Site Management Plan (required 30 days after the effective date of the Federal Facility Agreement), which will outline remedial work to be performed.

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Marine Corps Base Camp Lejeune is following EPA recommendations which suggest a prioritization of operable units, with the most serious sites moving out with remedial action first, followed by lesser contaminated sites being brought into the process as funding allows.

PROJECTED FY91 REMEDIAL ACTIONS

- Develop Work Plans, Health and Safety Plans, and Sampling/Analysis Plans for RI/FS at Sites 6, 48, 69.
- Hadnot Point: 1) Submit RI report for shallow soils, shallow and deep aquifer; 2) Submit FS and Risk Assessment for shallow soils and deep aquifer.
- Conduct Site Inspections at 9 sites.

PROJECTED FY92 REMEDIAL ACTIONS

- Commence RI at sites, 6, 48, and 69
- Hadnot point: 1) Conduct source study of soil contamination at sites 9, 21, 22, and 24; 2) Develop detailed feasibility study for shallow aquifer.
- Construction of petroleum product recovery units at sites 45 and 52 (UST).
- Construction of petroleum product recovery unit at Terawa Terrace (UST).
- Construction of petroleum product recovery unit at site 22 (UST).

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IMPLEMENTATION PLAN

A. Management Plan

In order to satisfy DOD requirements for Cooperative Agreements the State of North Carolina presents and agrees to the following provisions.

1. The North Carolina Department of Environment, Health, and Natural Resources has designated:

   Jack Butler
   401 Oberlin Road, Raleigh, NC 27605-1350
   919/733-2801

   as the lead technical representative for remedial program management activities at DOD facilities located with North Carolina.

2. The North Carolina Attorney General's office has designated:

   Jill Hickey
   Post Office Box 629, Raleigh, NC 27602
   919/733-8352

   as Department Counsel for matters arising from the remedial program management activities at DOD facilities located within North Carolina.

3. On the signing of the Cooperative Agreement between the State of North Carolina and DOD, the State agrees to provide quarterly reports for each site to DOD including: (a) itemized expenditures, (b) a summary of the progress, and (c) explanation of any variances. These reports are to be submitted following the end of each quarter, preferably within fifteen calendar days but not later than 30 calendar days of the quarter's end.

4. This application covers State management assistance for response activities at DOD installations within the State of North Carolina. When new response actions are identified for additional installations, they will be added to the current list by amendment of this cooperative agreement, and any adjustments in reimbursement will be made.

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B. Scope of Work

The State agrees to perform the following activities pertaining to response actions at DOD installations covered by this agreement.

1. Planning and Review

(a) Review, comment and make recommendations on existing and subsequent documents and data pertaining to removal, pre-remedial, remedial, accelerated operable units and other response actions.

(b) Identify and explain State applicable or relevant and appropriate requirements (ARARs).

(c) Participate in technical review committees.

(d) Designate a project manager(s) to participate in planning and review.

2. Technical Activities

(a) Conduct site visits as necessary to review and provide management assistance for response activities.

(b) Obtain split samples and subsequent analysis of these samples.

(c) Provide for independent quality assurance and quality control (QA/QC) of up to 10% of samples collected at installations covered by this agreement.

(d) Participate in establishing extent of off-post contamination through sampling, installation of off-post monitoring wells, if required, and analysis.

(e) Perform other technical services which are appropriate for the State to perform to aid in response actions.

3. Community Relations

Participate with DOD and other parties in the conduct of public education and community relations.

4. Legal and Financial Activities

(a) Prepare cost estimates and documentation of State costs relevant to this agreement.

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(b) Prepare, negotiate, amend and administer this Cooperative Agreement and the Department of Defense State Memorandum of Agreement.

(c) Review compliance of response activities with identified State ARARs.

(d) Review, comment and make recommendations on documents and data regarding prioritization of sites, including model development, testing and application.

5. General

(a) Provide other services that are set out in this agreement or are included in or are consistent with the terms of this agreement or with installation-specific agreements.

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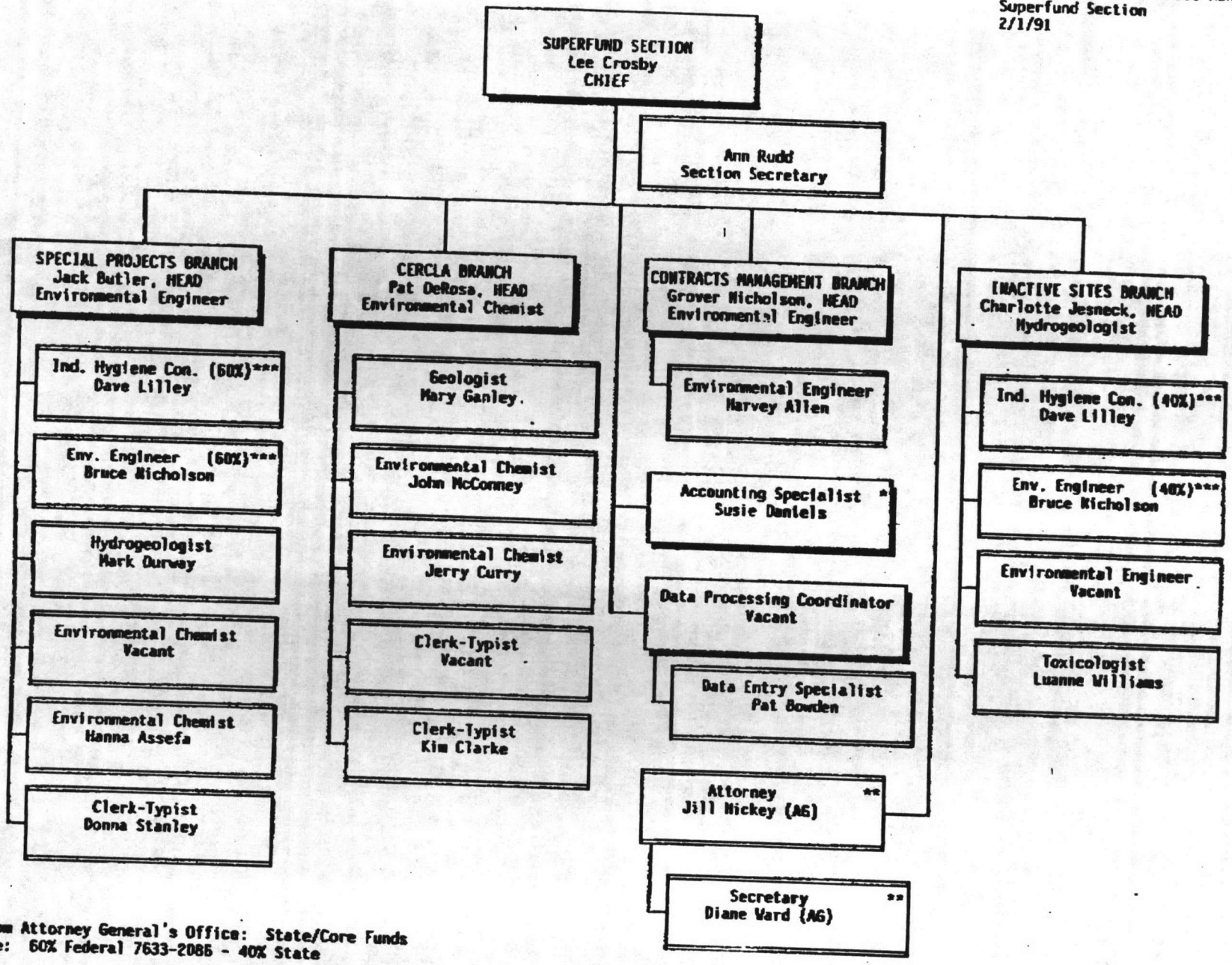
Department of Environment, Health, & Natural Resources

Division of Solid Waste Management
Superfund Section
2/1/91



* Core Funds
** Contracted from Attorney General's Office: State/Core Funds
*** Funding Source: 60% Federal 7633-2086 - 40% State

(Hand.dwg)

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PART V

A. EXPENSE SUMMARY

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EXPENSE SUMMARY

Camp Lejeune MCB

(August 1991 - September 1993)

		1991-92 Annual Salary	1992-93 Annual Salary	Work Year	August 91-Sept. 92	August 92-Sept. 93
1.	**Personnel**				$39,000	$42,000
	Environmental Engineer	$37,200	$40,100	2.00/yr.		
	Secretary	$18,000	$19,000	0.20/yr.		
	Personnel Totals for 12 months			2.20 work years		
2.	**Fringe Benefits**				$9,377	$9,959
3.	**Travel** (includes travel for other DEHNR Sections such as the Groundwater Section and possibly one attorney)				$6,212	$6,809
	6 to 8 out-of-state trips					
	25 to 30 in-state trips					
4.	**Equipment**				$4,500	$0
	Computer for Engineer					
5.	**Supplies**				$1,400	$1,600
6.	**Contractual** (not applicable)				$0	$0
7.	**Assignees** (not applicable)				$0	$0
8.	**Other**	1991-92	1992-93		$1,369	$1,156
	Postage	$219	$206			
	Telephone & Phone System	$450	$450			
	Medical Monitoring	$250	$250			
	Other (office maintenance, wiring, etc.)	$450	$250			
9.	**Direct Cost**				$61,858	$61,522
10.	**Indirect Cost** (27.8%)				$10,842	$11,678
	Total Cost				$72,700	$73,200

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Part VI

APPENDIX

A. Lobbying Form

B. Certification Regarding Drug-Free Workplace Requirements Grantees Other Than Individuals

C. Certification Regarding Debarment, Suspension, and Other Responsibility Matters

D. State Signature Authority Form

E. Copy of Signed DSMOA

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DOD Project Number

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instruction.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Nay person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

William W. Cobey, Jr. Secretary
Typed Name and Title of Authorized Representative

ERNEST G. [illegible]
DEPUTY SECRETARY

Signature of Authorized Representative

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RECIPIENT CERTIFICATION
FOR RECIPIENTS OTHER THAN INDIVIDUALS

DRUG-FREE WORKPLACE ACT 1988

The certification set forth below is a material representation of fact upon which reliance was placed when the agency determined to award the assistance agreement. If it is later determined that the recipient knowingly rendered a false certification, or otherwise violates the requirement of the Drug-Free Workplace Act, the Agency, in addition to any other remedies available to the Federal Government, may take action authorized under the Drug-Free Workplace Act.

A. The grantee certifies that it will provide a drug-free workplace by:

(a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;

(b) Establishing a drug-free awareness program to inform employees about --

(1) The dangers of drug abuse in the workplace;

(2) The grantee's policy of maintaining a drug-free workplace;

(3) Any available drug counseling, rehabilitation, and employee assistance programs; and

(4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;

(c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);

(d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will --

(1) Abide by the terms of the statements; and

(2) Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction;

(e) Notifying the agency within ten days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction;

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(f) Taking one of the following actions, within 30 days of receiving notice under subparagraph (d)(2), within respect to any employee who is so convicted --

(1) Taking appropriate personnel action against such an employee, up to and including termination; or

(2) Requiring such an employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purpose by a Federal, State, or local health, law enforcement, or other appropriate agency;

(g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e), and (f).

B. The grantee shall insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

401 Oberlin Road

Raleigh, Wake, NC 27605-1350

Authorized Signature ERNEST A. CASE DEPUTY SECRETARY

Date 7/12/91

William W. Cobey, Jr., Secretary

Typed Name and Title

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DOD Project Number

DOD/STATE MEMORANDUM OF AGREEMENT
COOPERATIVE AGREEMENT

CERTIFICATION REGARDING
DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency.

(b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property.

(c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses encumbered in paragraph (b) of this certification.

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to $10,000 or imprisonment for up to 5 years, or both.

William W. Cobey, Jr. Secretary
Typed Name & Title of Authorized Representative

Signature of Authorized Representative

7/22/91
Date

ERNEST A. CARL
DEPUTY SECRETARY

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08/13/91

DEPARTMENT OF DEFENSE AND STATE MEMORANDUM OF AGREEMENT (DSMOA)

In order to expedite the cleanup of hazardous waste sites on Department of Defense (DoD) installations within the State of North Carolina and ensure compliance with the applicable State law and regulations of the State, DoD and the Department of Environment, Health and Natural Resources, Solid Waste Management Division (SWMD) on behalf of the State of North Carolina enter into this Agreement.

Except as otherwise specified, the terms in this document are unique to this document only.

SECTION I
REIMBURSEMENT OF STATE COSTS

A. COVERAGE

1. This Agreement covers reimbursement of the costs associated with providing State services to Department of Defense installations for activities funded under the Environmental Restoration, Defense (ER,D) appropriation. Installations covered by this Agreement are those owned by the Federal government on the effective date of the Agreement including installations with sites on the National Priorities List (NPL) and installations with sites not on the NPL. The installations covered by this Agreement are listed in Attachment A. This Agreement does not cover the costs of services rendered prior to October 17, 1986; services at properties not owned by the Federal government; and activities funded from sources other than ER,D appropriation.

2. Unless a site-specific agreement provides otherwise, this Agreement is the mechanism for payment of the costs incurred by the State in providing the services listed in Paragraph B of this section in relation to ER,D funded activities at the installations covered by this Agreement. Full payment of State costs pursuant to this Agreement constitutes final settlement of any claims the State of North Carolina may have for performance of services outlined in Section I(B) with respect to ER,D funded work carried out after October 17, 1986, at all of the installations covered by this Agreement, except for those State costs covered by a site-specific agreement.

3. DoD agrees to seek sufficient funding through the DoD budgetary process in accordance with Section II and to pay the State of North Carolina for the services specified in paragraph B for all ER,D funded activities at installations covered by this Agreement, subject to the conditions and limitations set forth in this section.

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B. SERVICES

State services that qualify for payment under this Agreement include the following types of assistance provided by the State commencing at site identification and continuing through construction, as well as any other activities that are funded by ER,D:

1. Technical review, comments and recommendations on all documents or data required to be submitted to the State under an agreement between the State and a DoD Component, all documents or data that a DoD Component requests the State to review, and all documents or data that are provided by a DoD Component to the State for review as a result of a request from the State made under applicable State law.

2. Identification and explanation of State applicable or relevant and appropriate requirements related to response actions at DoD installations.

3. Site visits to review DoD response actions and ensure their consistency with appropriate State requirements, or in accordance with site-specific requirements established in other agreements between the State and DoD Component.

4. Participation in cooperation with DoD in the conduct of public education and public participation activities in accordance with Federal and State requirements for public involvement.

5. Services provided at the request of DoD-in connection with participation in Technical Review Committees.

6. Preparation and administration of a cooperative agreement (CA) to implement this Agreement, including the estimates of State costs.

7. Other services that the State will provide that are set out in this Agreement or are included in installation-specific agreements.

C. ACCOUNTING PROCEDURES

1. Subject to the provisions of paragraphs D and E, reimbursement of eligible State costs incurred between October 17, 1986, and the date of this Agreement shall be paid if the costs have been documented using accounting procedures and practices that reasonably identify the nature of the costs

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involved, the date the costs were incurred, and show that the costs were entirely attributable to activities at an installation covered by this Agreement.

2. Payment of eligible State costs for services provided after the effective date of this Agreement must comply with all applicable Federal procurement and auditing requirements.

D. MAXIMUM REIMBURSEMENT

Reimbursement for services provided under paragraph B for all installations included in Attachment A shall not exceed one (1) percent of the estimated total costs for all of the work that has been funded by ER,D since October 17, 1986, and that will in the future be funded by ER,D or a minimum of $50,000, per year, whichever is greater. Estimates of cleanup costs developed under this Agreement are provided solely for the purpose of calculating the amount of funding the State is eligible to receive.

E. ANNUAL BUDGET LIMITS

The State may ordinarily request that up to a maximum of twenty-five (25) percent of the total State services funds for all installations listed in Attachment A be provided in accordance with Section II during any fiscal year. DoD may approve an annual budget limit that exceeds twenty-five (25) percent of the total State services funds if the State demonstrates the need for a higher percentage based on the scope of the work projected during the fiscal year. At least ten (10) percent of a State's services funding request will be provided in accordance with Section II of this agreement during a fiscal year if the State requests an allocation of ten (10) percent or more for services under this Agreement. The State may carry over unused funds into subsequent years. If the cost of State services during a fiscal year exceeds the annual budget limit, the State may expend its own funds to pay the cost of those services. To the extent allowable under Federal procedures for cooperative agreements, the State may then seek reimbursement of these costs in a subsequent year through a cooperative agreement as long as the total amount of the payments to the State does not exceed the one (1) percent ceiling, or the annual budget limit for that fiscal year. A payment schedule for reimbursement of past costs will be devised by the State of North Carolina and the DoD.

F. ADJUSTMENT OF COST ESTIMATES

The State or DoD may request a review of total estimated ER,D funded project costs covered by this Agreement once during the terms of a cooperative agreement. The total project costs shall

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be revised to reflect the new estimates. The ceiling of one (1) percent of the total project costs shall be adjusted based on the revisions of the total project costs since October 17, 1986. If the total project costs following the Record of Decision (ROD) or equivalent document are lower than previously estimated, the State remains entitled to payment as follows:

a. the State is entitled to payment of all services rendered prior to completion of the new estimate so long as they are within the ceiling of the previous estimate; and,

b. reimbursement of future incurred costs for providing services, at the option of the State, in an amount either:

1. up to a total of previous and future costs of one (1) percent of the revised estimate; or,

2. the lesser of:

i) one quarter (1/4) of one (1) percent of the post ROD or equivalent documents costs; or,

ii) the remaining balance of the one (1) percent entitlement under the previous estimate.

G. PROCEDURES FOR REIMBURSEMENT

Procedures for State reimbursement through cooperative agreements (CAs) are as described in Attachment B and in accordance with Office of Management and Budget (OMB) Circulars A-102, A-87, and A-128. After a CA is awarded, the SWMD may submit a request for advance or reimbursement to DoD on a quarterly basis. DoD will process the request and transfer funds in accordance with Circular A-102. Within sixty (60) days after the end of each quarter, the SWMD shall submit to DoD a status report, including cost summaries which directly relate allowable costs actually incurred by the State under this Agreement during the quarter for services at each installation. Allowable costs shall be determined in accordance with this Agreement and Circular A-87. DoD shall reconcile continuing awards and close out completed awards in accordance with Circular A-102. Auditing of States programs shall be accomplished in accordance with Circular A-128.

H. ADDITIONAL WORK

When an installation requests that a State perform a specific technical study or similar technical support that could otherwise be done by a contractor, and SWMD agrees to do the work, funding

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will be negotiated between the installation and the State outside of this Agreement.

I. EMERGENCIES

In an emergency situation involving a threat to public health or the environment, the State must, unless the nature of the emergency does not permit notification, notify the DoD Component prior to taking removal action in order to be reimbursed for its reasonable costs. Reimbursement of the State for its work will be handled directly between the DoD component and the State, and outside of this Agreement. Disagreements that arise under this paragraph are subject to the Dispute Resolution process in Section IV.

SECTION II
FUNDING AND THE PRIORITY SYSTEM

A. The Office of the Deputy Assistant Secretary of Defense (Environment), as the designee of the Office of the Secretary of Defense responsible for carrying out the Defense Environmental Restoration Program, and the DoD components shall seek sufficient funding through the DoD budgetary process to carry out their obligations for response actions at DoD installations within the State. Funds authorized and appropriated annually by Congress under the ER,D appropriation in the DoD Appropriations Act shall be the source of funds for all work contemplated by this Agreement.

B. Should the ER,D appropriation be inadequate in any year to meet the total DoD requirements for cleanup of hazardous or toxic contaminants, DoD shall establish priorities among sites in a manner which maximizes the protection of human health and the environment. In the prioritization process, DoD shall employ a model which has been and will be further developed with the assistance of the States and the EPA. Future enhancements or refinements to the model shall occur in consultation with the States and the EPA. DoD shall also involve the States and the EPA in its use of this prioritization model through review of technical site data. The DoD components shall receive and give full consideration to information provided by the States regarding factors to be considered in decisionmaking in the annual prioritization process for allocating resources available for cleanups. The State accepts that a DoD prioritization system developed and operated as described in this subparagraph is needed and provides a reasonable basis for allocating funds among sites in the interest of a national worst first cleanup program. To that extent, the State will make every effort to abide by the priorities developed thereunder.

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C. Nothing in this Agreement shall be interpreted to require obligation or payment with regard to a site remediation in violation of the Anti-Deficiency Act (31 U.S.C. 1341).

SECTION III
LEAD AGENCIES

Each DoD Component shall designate an individual responsible for managing remedial and removal actions for each installation within the State. This individual shall be responsible for coordinating all tenant activities at the installation with regard to the remedial and removal action program. The individual will also act as remedial project manager (RPM) within the meaning of the National Contingency Plan (40 CFR Part 300).

The State shall designate a lead State agency for each DoD installation within the State. (This agency may vary by installation). The lead State agency for an installation shall coordinate among other State agencies to represent a single State position as to remedial/removal actions at the installation. The lead State agency shall designate a State Agency Coordinator (SAC) who shall be the single point-of-contact between the appropriate DoD component installation and the State regarding State involvement in the remedial and removal actions program at the installation.

SECTION IV
DISPUTE RESOLUTION

A. The Remedial Project Manager (RPM) and the State Agency Coordinator (SAC) shall be the primary points of contact to coordinate the remedial and removal program at each military installation within the State, including the resolution of disputes. With regard to installations or sites for which there are executed Federal Facility Agreements under CERCLA Section 120, dispute resolution provisions as specified in those agreements shall govern. For other sites, it is the intention of the parties that all disputes shall be resolved at the lowest possible level of authority as expeditiously as possible within the following framework. All timeframes for resolving disputes below may be lengthened by mutual consent.

1. Should the RPM and SAC be unable to agree, the matter shall be referred in writing as soon as practicable but in no event to exceed ten (10) working days after the failure to agree, to the installation commander and the chief of the designated program office of the lead State agency or their mutually agreed upon representatives designated in writing.

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2. Should the installation commander and the chief of the designated program office of the lead State agency or their mutually agreed upon representatives designated in writing be unable to agree within ten (10) working days, the matter shall be elevated to the head of the lead State agency and a counterpart member of the lead Service involved who shall be a general/flag officer or a member of the senior executive service.

3. Should the head of the lead State agency and the counterpart DoD representative fail to resolve the dispute within twenty (20) working days the matter shall be referred to the Governor and the Service Secretary concerned for resolution.

B. It is the intention of the parties that all disputes shall be resolved in this manner. Alternative dispute resolution methods may be used. In the event that the Governor and the Service Secretary are unable to resolve a dispute, the State retains any enforcement authority it may have under State or Federal law.

SECTION V
REOPENER

The terms of this Agreement may be modified at any time by mutual Agreement of the parties. If a party requests the Agreement to be reopened but the other party does not concur, the matter will be referred to an individual designated in writing by the signatories to this agreement. In the event they fail to agree within ten (10) working days the matter will be referred to the signatories of this agreement or their successors in office. If no resolution is reached within twenty (20) days, the Agreement shall not be reopened.

SECTION VI
TERMINATION

This Agreement may be terminated by either party at the expiration of any cooperative agreement entered into pursuant to this Agreement if the party seeking termination has notified the other party in writing at least ninety (90) days prior to the expiration of the cooperative agreement. After receiving a notice of termination, a party may invoke the dispute resolution process in Section IV. Each signatory of the agreement may involve other officials to whom they report in the process of resolution. The parties by mutual agreement may also refer the matter to the Governor of the State of North Carolina and his(her) counterpart within the Department of Defense.

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Alternative dispute resolution methods may be used. Failing their agreement, this Agreement shall be considered terminated as of the date the cooperative agreement expires.

Edythe McKinney
Edythe McKinney
Assistant Secretary for
Environmental Protection

DATE: 5/3/91

Thomas E. Baca
Deputy Assistant Secretary
of Defense (Environment)

DATE: 6/6/91

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ATTACHMENT A TO DSMOA

DOD INSTALLATIONS COVERED BY THIS AGREEMENT

State of North Carolina

Navy

1. Marine Corps Base Camp LeJuene

INSTALLATIONS MAY BE ADDED TO THIS LIST PERIODICALLY AS NECESSARY IN ACCORDANCE WITH SECTION V, REOPENER.

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ATTACHMENT B to DSMOA
PROCEDURES FOR STATE REIMBURSEMENT

- The Deputy Assistant Secretary of Defense for (Environment) (DASD(E)) and the Head of the Agency signing on behalf of the State will sign the DSMOA.

- The DSMOA is the overarching agreement of commitment between the DoD and the State, but *does not* obligate or commit funds.

- Reimbursement will be accomplished, using Federal Procedures for cooperative agreements (CAs), with States that have signed DSMOAs. Eligible activities are limited to those authorized for the Defense Environmental Restoration Program (DERP), and funded by the Defense Environmental Restoration Account (DERA), Sections 2701 *et seq.*, of Title 10 U.S.C., and as specified in the DSMOA.

  - Reimbursement will commence as soon as possible with DERA funds.

- DoD policies and procedures for processing CA applications and payments will be developed with input from the States and announced in a *Federal Register* notice.

  - In general, these activities will be centralized in the ODASD(E).

  - It is anticipated that these policies and procedures will encompass the following: who may apply, what can be funded, evaluation criteria for awards, submission procedures and closing dates for receipt of applications, and State responsibilities.

  - Within this framework, it is anticipated that monitoring and quarterly reporting procedures for States' program status and financial status will be developed.

- Administration of CAs will be in accordance with Office of Management and Budget (OMB) Circular A-102, Grants and Cooperative Agreements with State and Local Governments, and Title 32 CFR 278, Office of the Secretary of Defense, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

  - A State will submit a complete application package for Federal assistance, consisting of Standard Form 424 (SF 424) and attachments, including a proposal narrative, the signed DSMOA, and a project management plan. The State's application must also include a description of the type and amount of support services

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that the State plans to provide for each installation covered in the DSMOA for the specific award period of the CA.

- CAs will awarded for a term of two (2) years, based on an annual estimate of requirements. Applications will be accepted after signature of the DSMOA by both parties; DoD processing time for applications is expected to be two months.

- The DASD(E) will accept the application, review it, and make a decision as to the award. This CA agreement, when signed by both the DASD(E) and the Head of the Agency signing on behalf of the State, comprises the contractual relationship between the DoD and the State.

- States may request funds in accordance with the methods outlined in OMB Circular A-102 and 32 CFR 278. These documents provide for the following methods of payment: (1) Advances (Letter of Credit), (2) Reimbursement, and (3) Working Capital Advances. A State may request a payment method in its cooperative agreement application.

- Allowable costs will be determined in accordance with OMB Circular A-87, Cost Principles for State and Local Governments. Specific services to be provided by the States will be as described in the DSMOA.

- Auditing of States programs will be accomplished in accordance with OMB Circular A-128, Audits of State and Local Governments.

The following is additional information regarding the general procedures that DoD plans to use in implementing DSMOAs and CA's with the States:

1. DoD DASD(E) will invite States to sign DSMOAs and submit applications for CAs.

2. DASD(E) will send a memorandum (Attachment C) to the DoD Components (Army, Navy, Air Force, DLA, and other DoD agencies) asking them to cooperate with the States and compile necessary data. The States and Installations will communicate directly on response activities anticipated to take place over the next two years and on the total DERA cost estimate.

3. DoD Components will use their Chain-Of-Command to develop and pass on data to DASD(E): Component Headquarters will give the message to their Major Commands (e.g., Army Materiel Command), and the Major Commands will forward the message to their Installations (e.g., Sacramento Army Ammunition Depot).

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4. The Components will provide information, obtained from their Installations and Major Commands, to DASD(E) by State.

5. Each State contacts DASD(E) about its desire to have a DSMOA and CA, and works with DoD to have State-specific information inserted into the provisions where indicated in the model language and to fill out the CA application.

6. DASD(E) and the State sign the DSMOA and the CA.

7. The State submits requests for payment in advance based on anticipated workload or for reimbursement of services provided under the CA, on a quarterly basis.

8. Quarterly In-Process Reviews (IPRs), or alternative arrangements by mutual consent, will be held between DASD(E) staff and the State agency. IPRs will include State progress reports concerning activities and funding.

9. CA audits will be carried out in accordance with OMB Circular A-128.

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North Carolina Intergovernmental Review Process
State Clearinghouse

CH-1 Type or Print in Black Ink

STATE CLEARINGHOUSE USE ONLY
Log Number

IF PROJECT INCLUDES CONSTRUCTION/LAND ALTERATION COMPLETE SIDE 2 ALSO

I. PROJECT INFORMATION

1. a. Applicant/Recipient: a. Applicant Name: NC Depart. of Environment, Health, & Natural Resources
b. Organization Unit: Division of Solid Waste Management/Superfund Sect
c. Street/P. O. Box: PO Box 27687
City: Raleigh
e. State: NC
f. Zip Code: 27611
g. County: Wake
h. Contact Person: Lee Crosby
Phone (include Area Code): 919/733-2801

2. Type Applicant/Recipient: (Enter Appropriate Letter) → A
a. State d. County g. Special Purpose District j. Indian Tribe
b. Interstate e. City h. Community Action Agency k. Other (Specify):
c. Substate District f. School District i. Higher Education Institution

3. Congressional District Of:
a. Applicant: 4th
b. Project: 3rd

4. Project Title: Department of Defense-Defense Environmental Restoration Program

5. Project Start Date: 8/1/91
6. Duration: 24 months

7. Area of Impact (cities, counties, etc.): Onslow

8. Estimated Number of persons benefiting: 125,642

9. Has project been reviewed before by State Clearinghouse
☑ NO
☐ YES project #

II. PROPOSED FUNDING

10. Type of Assistance: (Enter Appropriate Letter(s)) → A
a. Basic Grant c. Loan e. Other (Specify):
b. Supplemental Grant d. Insurance

11. Type Application: (Enter Appropriate Letter) → A
a. New c. Revision e. Augmentation
b. Renewal d. Continuation

12. Type	GRANT CASH	GRANT IN-KIND	LOAN
a. Federal	145,900		
b. State			
c.			
d. County			
e. Other			
f. TOTAL	145,900		

13. Program a. Federal Catalog No.: 12.113
b. Title: 10 USC Section 2701

14. Federal Agency to Receive Request (name & complete address)
Headquarters - US Army Corps of Engineers
CEMP - RI
Attn: Art Shacter
20 Massachusetts Avenue, NW
Washington, DC 20314-1000

15. Estimated Date to be Submitted to Federal Agency: July 1991

III. PROJECT NARRATIVE (Purpose, Expected Accomplishments, Major Tasks—Attach Estimates) Line Item Budget

16.

The Camp LeJeune Marine Corps Base site was proposed for inclusion in the National Priority List (NPL) in June 1988 and finalized as an NPL site in October 1989.

The Camp LeJeune Military Reservation was established in 1941, and covers 170 square miles in Onslow County. The complex has a number of facilities, including the Marine Corps Air Station New River, which was established in 1951 and adjoins the base. The main functions of the base are to provide housing, training, logistical, and administrative support for Fleet Marine Force Units. The Navy has identified 77 potential waste disposal areas in Camp LeJeune and has designated 23 as posing a potential threat to public health and the environment. The Navy has detected pesticides in the soil and various contaminants in the groundwater. Several on-base drinking water wells have been closed. Approximately 13,800 people obtain drinking water from wells within 3 miles of the contamination on the site, with the nearest well being 3,500 feet away from one of the area of contamination. Groundwater is the sole source of drinking water for the base and the surrounding communities. Surface water from the base drains into the Atlantic Ocean via the New River. Both bodies of water are used for fishing and recreational activities.

The Remedial Investigation/Feasibility Study (RI/FS) and Remedial Designs (RD) will be performed at each of 34 sites within the Camp LeJeune Marine Corps site in the near future. This work is being performed under an Interagency Agreement signed by the US Department of the Navy, the US EPA, and the NC Department of Environment, Health, and Natural Resources. The primary purpose of the RI/FSs is to evaluate the need for the hazardous waste source control measures, identify alternative method of source control, analyze the alternatives, and carry out remedial actions.

The Support Agency Cooperative Agreement for the North Carolina Solid Waste Management Division, Superfund Section, will provide for monitoring the progress of the RI/FS, RD, RA, and consulting with DOD and EPA as the RI/FS, RD, and RA develops and provides information from the State files to DOD, EPA, and EPA contractors.

ERNEST A. CARL
DEPUTY SECRETARY

17. Name & Title (Certifying representative): William W. Cobey, Jr., Secretary
Signature:
Date: 7/15/91

Submit Eight (8) copies to address at bottom of Side 2

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DoD/STATE MEMORANDUM OF AGREEMENT
COOPERATIVE AGREEMENT

CERTIFICATE OF AUTHORITY

I, Lacy H. Thornburg, do hereby certify that I am the principal legal officer of the State of North Carolina, and that William W. Cobey, Jr. who executed this Cooperative Agreement on the behalf of the State is authorized to bind the State to all terms and conditions of said agreement.

IN WITNESS WHEREOF, I have made and executed this certification this 18th day of July, 1991.

Lacy H. Thornburg
Attorney General

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NAVFAC INSTRUCTION 6240.3B

From: Commander, Naval Facilities Engineering Command

Subj: DEPARTMENT OF THE NAVY POLLUTION CONTROL REPORTS (RESPONSIBILITY AND GUIDANCE)

Ref: (a) Executive Order 12088 of 13 Oct 1978
(b) Office of Management and Budget Circular No. A-106 of 31 Dec 1974
(c) Environmental Protection Agency Procedures for Reporting Proposed Pollution Abatement Projects for Federal Facilities of 20 Nov 1986
(d) DODINST 4120.14 of 30 Aug 1977 (Environmental Pollution Prevention, Control and Abatement)
(e) OPNAVINST 5090.1 of 26 May 1983 (Environmental & Natural Resources Protection Manual)
(f) OPNAVINST 11010.20E of 9 Jul 1985 (Facilities Project Manual) (NOTAL)
(g) NAVFACINST 11010.44D of 19 Nov 1979 (Shore Facilities Planning)
(h) MCO P11000.8B of 9 Dec 1983

Encl: (1) Guidance for Preparing New and Revised Navy Pollution Control Report (PCR) Exhibits
(2) Pollution Control Report (PCR) Exhibit
(3) Common Project Titles for PCR Exhibits

1. Purpose. To assign responsibility and provide guidance for the preparation, coordination, and distribution of Department of the Navy Pollution Control Reports (PCR).

2. Cancellation. NAVFAC Instruction 6240.3A of 22 October 1981.

3. Background

a. Reference (a), Executive Order 12088, Section 1-401, requires federal agencies to develop and implement plans to ensure that all facilities are in compliance with federal, state, and local environmental laws and regulations.

b. Reference (b) requires that uniform project documentation be prepared to identify and initiate proposed corrections to a deficiency or violation of an applicable environmental standard. Reference (b) also requires federal agencies to submit the PCR to the Environmental Protection Agency (EPA) for review and evaluation. This evaluation is a continuous process which begins

Underground Stg Tanks at GOCO facilities are not eligible for PA funds - see FAC ltr 4 Jan 90

ENCLOSURE (4)

in October and culminates in July/August with the preparation of a report known as the "OMB Report" or "A-106". This report is provided to OMB in September and focuses on projects which should be funded in the following fiscal year. The A-106 documents the justification and financial status for pollution abatement funding, provides a means to evaluate progress toward compliance goals, and serves as a basis for major decisions involving the Navy's Environmental Protection Program. The prioritization of financial resources to accomplish pollution abatement corrective actions is dependent on the quality and accuracy of the information in the A-106 Report. PCR information must be accurate and up-to-date at all times. References (c), (d) and enclosure (1) provide specific requirements for PCR preparation and submittal.

c. Reference (e) assigns the Naval Facilities Engineering Command (NAVFACENGCOM) the responsibility for the planning, coordination, submission, and publication of the Department of the Navy PCR.

4. Scope. Pollution control project documentation shall be prepared to (1) identify air, CERCLA, solid and hazardous wastes, drinking water, noise, ocean dumping, pesticides, radiation, solid waste, toxic substance control, and water pollution deficiencies, (2) initiate corrective measures, and (3) establish funding requirements. Project documentation and budget requirements must be developed in accordance with references (f) and (g), and enclosure (1) to be considered for approval and inclusion into the PCR.

There are several types of funds which are centrally managed by NAVFACENGCOM for the correction of pollution abatement deficiencies. Types of funds available include:

a. Operations and Maintainence, Navy (O&M,N) Pollution Abatement Funds. These funds are budgeted by NAVFACENGCOM through NAVCOMPT strictly for the purpose of correcting pollution abatement deficiencies at Navy shore activities. Marine Corps activities are not eligible for these funds. Marine Corps pollution abatement projects are funded by the Commandant of the Marine Corps (CMC). In accordance with reference (a), no funds appropriated or apportioned for pollution abatement projects under the Navy Pollution Abatement Program shall be used for (1) new construction, where such construction implements mission objectives and is not itself a pollution abatement project, (2) replacement of worn out operational pollution abatement equipment or facilities, and (3) routine operation and maintenance of pollution abatement equipment or facilities. As stated in reference (g), Chapter 7, contruction costs for O&M,N Pollution Abatement Special Projects cannot exceed $200,000. Any construction that exceeds $200,000 must be funded by Military Construction (MILCON) funds.

b. Military Construction, Navy (MILCON), Pollution Abatement Funds. These funds are available for real property acquisitions, such as domestic sewage and industrial wastewater treatment plants, municipal sewage connections, and hazardous waste storage facilities at Navy installations. As stated in paragraph 4.a. above, a Pollution Abatement MILCON project has contruction costs exceeding $200,000. Marine Corps activities are eligible for these funds. Marine Corps pollution abatement projects that qualify for MILCON are funded by the CMC.

c. Other Procurement, Navy (OPN), Pollution Abatement Funds. Centrally managed OPN funds are available for centrally procured Pollution Abatement equipment for Navy activities (i.e., oil skimmers, waste oil crafts (DONUTS), mooring systems, utility boats, and workboat platforms). Marine Corps activities are not eligible for these funds. Marine Corps pollution abatement equipment projects are funded by the CMC. For those items that are not centrally procured, a limited amount of funding is available for equipment with a unit value of $15,000 or more. The FY 1988 DoD Authorization and Appropriations Act increased the unit value threshold from $5,000 to $15,000. Accordingly, the noncentrally managed items of equipment having a unit value of less than $15,000 dollars are expenses and will be funded by the Operation and Maintenance Appropriation. Noncentrally managed items of equipment having a unit value of $15,000 dollars or more are investment costs and will be funded by the procurement appropriation. All centrally managed items of equipment are investment costs and will be funded by the procurement appropriations.

d. Environmental Restoration Funds. The Superfund Amendments and Reauthorization Act of 1986 provided for continuing authority for the Defense Environmental Retoration Account (DERA). The DERA is specially appropriated to DoD from Congress for cleanup of past hazardous waste disposal sites at both Navy and Marine Corps activities. This is a transfer account which DoD uses to provide DERA funds to the military services. Based upon the Navy's requirements, which we identify through our PCR, DoD transfers these funds to Navy as either O&M,N, MCON, or Other Procurement, Navy (OPN) funds, depending on their intended use.

Two types of DERA funds are currently available for Navy and Marine Corps activities:

(1) Installation Restoration: funds to identify, investigate, assess, control and/or remove contamination by toxic and hazardous substances and wastes resulting from past disposal practices and spills on Navy and Marine Corps installations. This includes site investigations and cleanups of past contamination from underground storage tanks occurring prior to 1 March 1986 and tanks abandoned prior to 1 January 1984. Cleanup of contamination incidental to tank replacement must be funded by the activity. O&M,N and occasionally MILCON funding are available under this category.

(2) Other Hazardous Waste Operations - funds for projects to develop and implement waste minimization technologies in such areas as hazardous material substitution, process changes, recycling, and waste treatment. Both O&M,N and OPN funds are available in this category (i.e., Used Solvent Elimination Study (O&M,N funded) and Used Solvent Still procurement (OPN funded).

5. Discussion.

a. The PCR has been prepared since 1967. Currently, each project included in the PCR is comprised of an approved exhibit. This exhibit provides a complete description of the deficiency, proposed corrective action, and funding requirements using the parameters discussed in enclosure (1).

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b. An approved new project exhibit and revisions to an existing exhibit are entered into the PCR data file continuously. An automated data processing (ADP) system facilitates publication of updated PCR data. This system utilizes a working copy printout. Printouts are issued monthly to activities and their cognizant NAVFAC Engineering Field Division (EFD) or funding Command for those new and revised projects submitted during the previous month. In addition, a Planning, Programming, and Budgeting System (PPBS) four-year report is generated monthly to reflect the current project execution plans. The monthly PPBS run occurs on the third Wednesday of each month. Any revisions or additions to appear in this run must be entered into the PCR data base before that particular Wednesday.

6. Action. To ensure the timely and accurate submission and distribution of the PCR, the following actions are required:

a. Naval activities will:

(1) Prepare new PCR project documentation, using the procedures and formats prescribed by enclosures (1) and (2), as appropriate.

(2) Submit new PCR project documentation for projects funded by NAVFACENGCOM or operational funds of the Naval activities to the cognizant NAVFACENGCOM EFD.

(3) Submit PCR project documentation for new projects funded by other major claimants and subclaimants, such as SPAWAR, NAVSEA, NAVAIR and NAVSUP, to their appropriate SYSCOMHQ via the geographically responsibile NAVFAC EFD. Submit revisions to the existing PCR project documentation directly to the EFDs.

(4) Submit PCR project documentation for new projects funded by the Commandant of the Marine Corps (CMC) to CMC via the geographically responsible EFD. Submit revisions to existing PCR project documentation directly to CMC.

b. NAVFACENGCOM EFDs will:

(1) Prepare and update PCR project documentation on projects using the procedures and formats prescribed by enclosures (1) and (2), as appropriate.

(2) Provide technical assistance and guidance to activities within their geographical area of responsibility regarding subject procedures.

(3) Validate all PCR project documentation received and ensure the data is technically adequate, complete, and accurate.

(4) Assure that the PCR project documentation conforms to the funding limits established in reference (g) for construction, maintenance, repair, equipment installation, etc.

(5) Submit one copy of the validated PCR project documentation for new projects to NAVFACENGCOMHQ Code 181 for approval of projects that qualify for NAVFACENGCOM centrally managed funding. When projects are to be funded by other claimants or CMC, the project documentation should be submitted directly to the appropriate claimant or CMC, respectively. The EFD shall make recommendations to the claimant or CMC in those cases where a project is considered questionable for pollution abatement funding.

(6) Enter revisions to existing NAVFACENGCOM sponsored PCR projects via the PCR on-line system.

(7) Notify NAVFACENGCOMHQ Code 181 before proceeding to contract award on any project which has a change in scope or cost resulting in cost increases of $50K or 50% over the original cost estimate.

c. Major claimants and systems commands (SYSCOMS) will:

(1) Review and validate activity PCR project documentation, in accordance with enclosures (1) and (2), as appropriate.

(2) Submit validated PCR project documentation for both new and revised projects directly to NEESA, Code 112F, Port Hueneme, CA.

d. The Commandant of the Marine Corps (CMC) will:

(1) Review and validate activity PCR project documentation, in accordance with enclosures (1) and (2), as appropriate.

(2) Submit validated PCR project documentation for both new and revised projects directly to NEESA, Code 112F, Port Hueneme, CA.

e. NAVFACENGCOMHQ will:

(1) Prepare and update PCR project documentation, using the procedures and formats prescribed by enclosures (1) and (2).

(2) Provide final endorsement on NAVFACENGCOMHQ centrally managed projects and ensure that the data is technically adequate, complete and accurate.

(3) Submit validated PCR project documentation for new projects to NEESA, Code 112F, Port Hueneme, CA.

(4) Update NAVFACENGCOMHQ projects and Military Construction (MILCON) appropriation projects via the PCR on-line system.

(5) Provide technical assistance and guidance to EFDs regarding subject procedures.

(6) Provide direction to NEESA concerning the maintenance and distribution of the PCR.

f. The Naval Energy and Environmental Support Activity (NEESA), Port Hueneme, CA will:

(1) Prepare and update PCR project documentation, using the procedures and formats prescribed by enclosures (1) and (2).

(2) Update all Pollution Abatement and Hazardous Waste Minimization Equipment OPN projects (i.e., Oil Spill Equipment, Plastic Media Blasting, USE Equipment, etc.) via the PCR on-line system. In addition, update those Pollution Abatement and DERA funded O&M,N projects where NEESA is responsible. Some of these types of projects may be Preliminary Assessments/Site Inspections, Remedial Investigation/Feasibility Studies, Remedial Actions, Plastic Media Blasting Installation, Hard Chrome Plating Retrofits, Skimmer Refurbishments, and On-Scene Operators Training (OSOT) courses.

(3) Maintain and update the ADP file of new/revised PCR exhibits and provide working copy of Exhibits to the shore activities and cognizant EFD or funding Command.

(4) Distribute the PCR and other information relating to the PCR as directed by NAVFACENGCOM.

(5) Maintain a historical file of microfiche for PCRs 1967-present and provide microfiche copies upon request.

(6) Provide monthly PCR updates to EPA to update their Federal Facilities Information System for A-106 reporting to OMB.

(7) Provide semi-annual (June and December) PCR Exhibits to CNO (OP-45), NAVFACENGCOMHQ and the EFDs. Review the PCR distribution list in an effort to eliminate unnecessary copies and ensure the distribution includes all active participants and other users on a need-to-know basis.

(8) Report inconsistencies to EFDs in their project reports.

g. Users of PCR information (major/subclaimants, Naval activities, etc.) may:

(1) Request NEESA to place their name on the PCR distribution list.

(2) Request historical microfiche from NEESA.

(3) Request current copies of this instruction from the Naval Publications and Forms Center (NPFC), 5801 Tabor Avenue, Philadelphia, PA 19120.

7. Report

a. Navy Activities. The reporting requirements prescribed are assigned control symbol (DD-M(SA)1383(6240)), and have been approved by the Chief of Naval Operations.

b. Marine Corps Activities. The Commandant of the Marine Corps, by reference (h), has directed Marine Corps activities to comply with the reporting requirements of references (b) and (c). Control symbol DD-6240-07 has been assigned.

8. Coordination. This directive has been coordinated with the Commandant of the Marine Corps.

Distribution (2 copies each)
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Philadelphia, PA 19120

DOC. NO: CLEW - 00698 - 12.04 - 01/01/01

GUIDANCE FOR PREPARING NEW AND REVISED NAVY POLLUTION CONTROL REPORT (PCR) EXHIBITS

Guidance for Preparing New Exhibits

1. A PCR Exhibit provides a complete description of the pollution deficiency, the proposed remedies, and funding requirements to correct the problem. All information required must be provided as described below. If not complete, the exhibit will be returned.

2. Enclosure (2) is the Exhibit format you need to use when submitting a project request. This format may be reproduced or retyped, as necessary, to meet the length requirements of each individual project and the information printed thereon.

3. The following data must be provided for each Exhibit.

I. COMPLETING PAGE ONE OF THE EXHIBIT

A. MEDIA. Enter one of the following PCR medias as defined below. The media represents the environmental law which requires the submission of a pollution problem/deficiency that needs correcting.

Air
CERCLA
Drinking Water
Noise
Ocean Dumping
Pesticides
Radiation
Solid Waste
Toxic Substance Control Act
Water

Note that a separate exhibit is required for each different project in each media. The underlined letters shown above are media code letters and will prefix project numbers.

B. EFD. Enter the name of the submitting activity's cognizant NAVFAC Engineering Field Division.

C. UIC (Unit Identification Code): Enter the Service Code N (Navy) or M (Marine Corps) and and the submitting activity's 5-digit Unit Identification Code (UIC). The UIC is also referred to as the Bureau Control Number or BCN. This is further explained in the NAVCOMPT Manual, Volume 2, Chapter 5. An example of a UIC is N00025 for NAVFACHQ.

D. PROJECT NUMBER. Enter only A, C, D, N, O, P, R, S, T, or W, depending on the media. (See Para A above). The other four characters consist of three numeric digits that identify the activity and one alpha character that identifies the sequence of the project at the activity. These last four characters are assigned by NEESA after NAVFACHQ approves the project. In addition, NEESA will also assign project numbers to those projects funded by other claimants. Once a project number is assigned and entered into the PCR system, it cannot be changed. NEESA can DELETE the entire project from the system, assign a new project number, and reenter the project as requested.

E. PROJECT TITLE. Enter a brief descriptive identification of the project. Length of this field is limited to 50 characters. Enclosure (3) contains some commonly used project titles for the Navy.

F. ACTIVITY. Enter the activity's name where the pollution deficiency is located.. The activity name must be compatible with the UIC, because when NEESA enters the project into the system the activity name is computer generated to coincide with the UIC. Once the UIC is entered into the PCR system, the activity name cannot be changed.

G. FUNDING COMMAND. Enter only the identification code of CMC, SYSCOM or shore activity providing funds. The only authorized codes are NAVMED, CMC, NAVFAC, NAVAIR, NAVSEA, NAVSUP, SPAWAR, NAVCOMPT, ONR, and ACTIVITY.

H. STATUS. For new projects or status changes, enter the status code for one of the following. The status code must be changed as the project status progresses or is dropped. When the project status is COMPL or DISC, the project will appear as "inactive". All other status codes will appear as "active".

a. PP - Preliminary Planning, not yet under design

b. DES - Under design

c. CONSTR - Under construction

d. COMPL - Completed

e. CONTIN - Continuous; applies to project that is funded on a continuing basis, year after year.

f. DEFER - Deferred; applies to a project that has been funded but is being delayed because of extenuating circumstances.

g. DISC - Discontinued; applies to a project where the source of pollution has been eliminated (either before or after partial funding); therefore, project is no longer required. Reason should be noted under "OTHER PCR INFORMATION." See Para II.E.

I. APPROPRIATION. Enter one of the following applicable abbreviations of appropriation accounts:

Appropriation Account	Abbreviation (APPN)
Military Construction, Navy (Pollution Abatement Funds)	MCONP
Military Construction, Navy (Regular Funds)	MCON
Military Construction, Marine Corps (Pollution Abatement Funds)	MCMCP
Military Construction, Marine Corps (Regular Funds)	MCMC
Military Construction, Naval Reserve	MCNR
Operations and Maintenance, Navy	O&MN
Operations and Maintenance, Marine Corps	O&MMC
Other Procurement, Navy	OPN
Ships Construction, Navy	SCN
Aircraft Procurement, Navy	APN
Family Housing, Navy	FHN
Navy Industrial Funds	NIF
Procurement, Marine Corps	PMC
Capital Maintenance and Rental Funds	CMRF
Non-Appropriated Funds	NAPF
Research, Development, Test and Evaluation	RDT&E
Weapons Procurement, Navy	WPN
Non-Appropriated Funds, Marine Corps	NAFMC

J. SUBAPPROPRIATION. Enter one of the following subappropriations. These subappropriations apply to Navy projects only.

Subappropriation	Abbreviation
Pollution Abatement	PA
Installation Restoration	IR
Hazardous Waste Minimization	HWM

K. INTERNAL PROJECT NUMBER. Enter the Activity or EFD internal project number or Military Construction "P" number. This is used for cross reference purposes in project tracking. The field will hold three project numbers consisting of seven alpha-numeric characters each. Please refer to Chapter 7, Section 7107 of reference (g), the Facilities Projects Manual.

L. COST OF POLLUTION CONTROL MEASURES IN THOUSANDS OF DOLLARS.

a. Fiscal Year - enter the fiscal year or years, as appropriate. (i.e., design scheduled in FY88 and Contruction scheduled in FY89).

L. COST OF POLLUTION CONTROL MEASURES IN THOUSANDS OF DOLLARS (Cont'd).

b. Budgeted Amount ($000) - This column should contain the budget estimate or current working estimate for the project during each appropriate fiscal year listed. A good example of this is the Installation Restoration projects, where you have Remedial Investigation/Feasibility Studies or Remedial Actions that are funded over several fiscal years.

c. Funded Amounts ($000) - Fill out if applicable. Usually, you will not have this column filled out when submitting a PCR for approval. In emergencies, however, you may get verbal approval over the telephone followed up by a PCR. If this happens, fill out the Fiscal Year/Years and Budgeted Amounts as explained above. Fill out the Funded Amount only if you have actually committed or obligated funds against this project.

Consequently, the Budgeted Amount of a project will usually stay the same, unless the working estimate increases. As you "spend" funds against the project, this amount will appear under the Funded Amount.

M. AGENCY PROJECT SCHEDULE DATES. This schedule depicts the various stages of project execution, including start of design, completion of design, start of construction, completion of construction, final compliance, and regulatory final compliance. Dates to be entered into this schedule consist of the month and year. For design start, also enter the day of the month. In order to maintain this information in an accurate, consistent and consise manner, it is necessary to update the project schedule as follows:

a. Prior to execution of the contract, enter the Navy-estimated schedule.

b. After execution of the contract, enter the projected dates.

c. During execution and upon completion of the project, enter the actual completion dates for each stage of accomplishment.

d. The final compliance date identifies when the Navy estimates compliance is to be attained.

e. The regulatory final compliance date indentifies when final compliance must be attained to satisfy permit requirements or regulatory date.

The project schedule dates should be consistent with the status and funding information discussed above. The fiscal year for project design or construction funding should not be later than the fiscal year of the design start date or construction start date, respectively.

N. POLLUTANT CATEGORY. Enter one of the following codes to identify the category of pollutants to be controlled by the project. This information is required by EPA. Applicable categories are:

HAZD	Hazardous Pollutants
POTW	Publicly Owned Treatment Works
MOBL	Mobile Air Pollutants
MSDV	Marine Sanitation Device
SPCC	SPCC Plan
TOXC	Toxics
RADN	Radioactive Pollutants
UIC	Underground Injection Control
PCB	Polychlorinated Biphenyl Control
LUST	Leaking Underground Storage Tanks
NPS	Non Point Source
GWAT	Groundwater Monitoring
STAT	Stationary Source
DWAT	Drinking Water
PH-1	IR Phase 1 (Preliminary Assessment/Site Inspection)
PH-2	IR Phase 2 (Remedial Investigation/Feasibility Study)
PH-3	IR Phase 3 (Technology Development or R&D)
PH-4	IR Phase 4 (Remedial Decision/Remedial Action)
CORA	Correction Action (RCRA)
SUBD	Landfill (Subtitle D)

O. CORRECTIVE ACTION CODE. No input required. NEESA enters the appropriate Corrective Action Code when entering the exhibit into the PCR. This Corrective Action Code is to identify corrective action taken to solve the problem.

P. NAVFAC PROGRAM ELEMENT. No input required. Computer generated upon entering the Corrective Action Code.

Q. COMPLIANCE STATUS CODE. One of the following codes must be circled on the exhibit which most accurately identifies the current compliance status of the pollution source for which this project is being funded.

ESDP Does not meet established standard and compliance deadline has passed.

ESDF Does not meet established standard and compliance deadline is in the future.

PSDF Does not meet pending standard and compliance dealine is in the future.

ESRO Meets established standard but needs replacement due to obsolescence.

ESRE Meets established standard but needs replacement due to need for expansion.

DOC NO: CLEW-00698-12.04-01/01/01

Q. COMPLIANCE STATUS CODE (Continued)

ESDL Meets established standard but needs to demonstrate leadership.

CMPA Project required to meet the conditions of a signed Federal Facility Compliance Agreement or Consent Order.

INOV Project required to correct deficiencies found on inspections by a regulated authority or cited in a Notice of Violation or equivalent.

OTHR Other

R. PROJECT ASSESSMENT. One of the following must be circled on the PCR Exhibit, as applicable. This coding is required by EPA and describes why the project has been requested.

High Project ciritical to agency program and/or cleanup of local environment.

Medium Project important to agency program and/or cleanup of local environment.

Low Project desirable to agency program and/or cleanup of local environment.

S. VARIOUS LOCATIONS. Circle either yes or no, depending on whether the project affects more than one activity.

T. LEGAL ACTION CODE. Enter "L" if the project is being requested as a result of pending legal action. Explain under "OTHER PCR INFORMATION".

U. PRIORITY. No input required. This is a field that is available to the Engineering Field Divisions for computer select purposes. There are four characters in this field.

V. LEGAL CITATION. No input required. This is a field that is available to the Engineering Field Divisions for computer select purposes. There are eight characters in this field.

II. COMPLETING PAGES 2 AND 3 OF THE EXHIBIT

The following four sections, Problem Statement, Remedial Action, Applicable Standards, and Other PCR Information, must be filled out as explained below. Descriptions should be complete and answer all applicable questions in order for the reviewing engineer to adequately review the project. Those PCRs that are not adequately completed will be returned to originating Engineering Field Divisions for revision.

A. PROBLEM STATEMENT. Enter a brief description of the problem in the first three lines (numbers 0001-0003). Each of these lines are limited to 50 characters only. These three lines should be a complete summary of the problem, because they are extracted and submitted to EPA monthly. Follow this with a detailed description of the problem statement starting on line 0010.

B. PROBLEM STATEMENT (Cont'd). There is no need to repeat the first 3 lines, 0001-0003, in the detailed description. This detailed description is for Navy use. The following questions must be answered in the detailed description, if applicable:

Specific type of pollution.
Amount of pollution.
Pollution source.
Existing treatment
Effectiveness of existing treatment

C. REMEDIAL ACTION. Enter a summation of remedial action proposed by the project in the first three lines (numbers 0001-0003). Each of these lines are limited to 50 characters only. These three lines should be a complete summary of the remedial action, because they are also extracted and submitted to EPA monthly. This summation should start with a verb (i.e., construct, extend, test). Follow this summation, starting on line 0010, with a detailed description of the control devise or process modification proposed to bring the pollution source into compliance. Include all applicable specifications for the equipment, facility or materials to be utilized.

D. APPLICABLE STANDARDS. Enter a summation of the applicable standards in the first three lines (numbered 0001-0003). Each of these lines are limited to 50 characters only. A complete summary of the applicable standards should fit in these three lines because they are extracted and submitted to EPA monthly. Follow this with a statement of the specific requirements that is the most stringent requirement applicable to the problem statement. If it is a federal requirement, the federal law, regulation, and date of the regulation should also appear in this section.

E. OTHER PCR INFORMATION. Include information that does not appear elsewhere on the Exhibit that is necessary for evaluating the project. Types of information which can be included in this section are:

a. If a proposed project in one solid waste area is likely to generate pollution of another kind (i.e., air) include a description of the additional pollution impacts.

b. Any enviromental-related litigations which may involve the project should be explained.

c. When a project status is changed to either discontinued or other, explain why.

d. For projects under the Installation Restoration program, include the specific site numbers, site titles and costs associated with each site. This is mandatory for all IR PCRs.

e. Hazardous Waste Minimization projects must contain economic analysis information.

Doc. No.: ECW - 0010 - 12.04 - 07/01/01

ADVANCE

NAVFACINST 6240.3B

ENVIRONMENTAL POLLUTION CONTROL REPORT (PCR) EXHIBIT
PROPOSED PROJECT

MEDIA: _____ EFD: _____ UIC: _____

PROJECT NAME: _____

ACTIVITY: _____

FUNDING COMMAND: _____ STATUS: _____ APPN: _____
SUBAPPN: _____

INTERNAL PROJECT NUMBER: _____

ESTIMATED COSTS OF POLLUTION CONTROL MEASURES ($000)

	--------DESIGN--------		---CONSTRUCTION/STUDIES---	
FISCAL YEAR	BUDGETED AMOUNT	FUNDED AMOUNT	BUDGETED AMOUNT	FUNDED AMOUNT
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

AGENCY PROJECT SCHEDULE DATES

	MONTH	YEAR	
DESIGN START:	_____	_____	
DESIGN COMPLETION:	_____	_____	
CONSTRUCTION START:	_____	_____	
CONSTRUCTION COMPLETION:	_____	_____	
FINAL COMPLIANCE:	_____	_____	(Date Navy estimates compliance to be obtained)
REGULATORY FINAL COMPLIANCE:	_____	_____	(Date final compliance must be obtained to satisfy permit requirements/reg date.

POLLUTANT CATEGORY: _ _ _ _ (EFD INPUT) CORRECTIVE ACTION CODE: _ _ _ NEESA INPUT

COMPLIANCE STATUS CODE: (EFDs must circle most applicable code)
ESDP ESDF PSDF ESRO ESRE ESDL CMPA INOV OTHR

PROJECT ASSESSMENT: (EFDs circle one) VARIOUS LOCATIONS: (EFDs circle one)
HIGH MEDIUM LOW YES NO

LEGAL ACTION CODE: ____ (EFDs to enter L if project being requested as result of pending legal action. Explain in "Other PCR Information, Section 4.

The following two fields reserved for EFD/NEESA/HQ computer select purposes.
PRIORITY: _ _ _ _ (4 DIGITS) LEGAL CITATION: _ _ _ _ _ _ _ _ (8 DIGITS)

Enclosure (2)

PROJECT NAME: _____

1. PROBLEM STATEMENT: First 3 lines limited to 50 characters each, brief description of the problem--extracted and submitted to EPA for A-106 Reporting. Follow with detailed description answering the following: specific type of pollution, amount of pollution, pollution source, existing treatment, and effectiveness of existing treatment.

0001 _____
0002 _____
0003 _____
0010 _____
0020 _____
0030 _____
0040 _____
0050 _____
0060 _____
0070 _____
0080 _____
0090 _____
0100 _____
0110 _____
0120 _____
0130 _____
0140 _____

2. REMEDIAL ACTION: First 3 lines limited to 50 characters each, brief description of the problem--extracted and submitted to EPA for A-106 Reporting. Follow with detailed description of control devise or mod proposed to bring pollution source into compliance. Include all applicable specifications for equipment, facility or materials to be utilized.

0001 _____
0002 _____
0003 _____
0010 _____
0020 _____
0030 _____
0040 _____
0050 _____
0060 _____
0070 _____
0080 _____
0090 _____
0100 _____
0110 _____
0120 _____
0130 _____
0140 _____

PROJECT NAME: _____

3. APPLICABLE STANDARDS: First 3 lines limited to 50-characters each, summation of applicable standards governing the project. Follow with a statement of the specific requirement that is the most stringent requirement applicable to the problem statemelnt. If federal requirement, include federal law, regulation and date of regulation.

0001 _____
0002 _____
0003 _____
0010 _____
0020 _____
0030 _____
0040 _____
0050 _____

4. OTHER PCR INFORMATION: Information contained in this section for internal Navy use only. In addition to items below, include such things as specific project sites (i.e., buildings, specific IR cleanup sites w/associated site titles and costs, etc.), Notice of Violations, if activity is funding design of a project, etc. Also, economic analysis information must be included for all projects submitted requesting Hazardous Waste Minimization funding.

0001 ACTIVITY POC: A/V: _____
0002 DATE OF STEP II: _____
0003 EFD EIC: A/V: _____
0010 NAVFACHQ REVIEWING ENGINEER: _____
0020 _____
0030 _____
0040 _____
0050 _____
0060 _____
0070 _____
0080 _____
0090 _____
0100 _____
0110 _____
0120 _____
0130 _____
0140 _____
0150 _____
0160 _____

Notes:
(1) Additional lines may be added as necessary in Sections 1 thru 4 of this exhibit.
(2) For additional information on "Step II " documentation required for Special Projects funding, refer to OPNAVINST 11010.20E (Facilities Projects Manual).

EXHIBITS COMPLETED INCORRECTLY WILL BE RETURNED TO THE SUBMITTING EFD.

COMMONLY USED PROJECT TITLES FOR PCR EXHIBITS

POLLUTION ABATEMENT (O&M,N)

1. Conduct Sanitary Landfill Air Quality Assessment
2. Install Backflow Preventers
3. Construct Pest Control Shop/Facility
4. Construct Haz Waste Storage Facility
5. Construct Haz Waste Accum Point Staging Area
6. Sanitary Landfill Study
7. Correct SPCC Deficiencies
8. Construct Firefighting Trng Facility
9. Water System Discharge Elimination
10. Oil/Water Separator (non-hazardous only)
11. Sanitary Sewer System Connection
12. Pretreatment Study (NPDES)
13. Wastewater Treatment Plant Dechlorination Fac
14. UST Assessment (Tank Testing, Monitoring System Installation & Tank Registration of operational tanks)
15. PCB Transformer Replacement
16. PCB Transformer Replacement/Retrofill
17. RCRA Facility Investigation (current SWMU only)

DEFENSE ENVIRONMENTAL RESTORATION ACCOUNT (DERA) O&MN

Installation Restoration Account

1. PA/SI (Preliminary Assessment/Site Inspection)
2. RI/FS (Remedial Investigation/Feasibility Study)
3. RD/RA (Remedial Decision/Remedial Action)
4. Removal Action
5. IR Salary/Support Requirements
6. UST Remedial Investigation (includes testing and installation of monitoring wells for highly suspected or known leaking USTs prior to 1 March 1986. Also includes investigation of contamination of USTs abandoned prior to 1 January 1984).
7. UST Remedial Action
8. 3RD Party Cleanup (Site Name)
9. RCRA Facility Investigation (Past SWMUs only)

Hazardous Waste Minimization Account (O&M,N)

1. Install PMB Equipment
2. Used Solvent Elimination Study
3. Hard Chrome Plating Retrofit
4. Feasibility Study for Existing Rotary Kiln
5. Minimize Plating/Paint Stripping
6. Otto Fuel Waste Minimization

Hazardous Waste Minimization Account (OPN)

1. Procure USE Equipment
2. Procure PMB Equipment
3. Procure Can Crusher

( ) information only

DOC NO: CLES-00698-15.04-01/01/01

ADVANCE

NAVFACINST 6240.3B

ENVIRONMENTAL POLLUTION CONTROL REPORT (PCR) EXHIBIT
PROPOSED PROJECT

MEDIA: _____ EFD: _____ UIC: _____

PROJECT NAME: _____

ACTIVITY: _____

FUNDING COMMAND: _____ STATUS: _____ APPN: _____

INTERNAL PROJECT NUMBER: _____ SUBAPPN: _____

ESTIMATED COSTS OF POLLUTION CONTROL MEASURES ($000)

	--------DESIGN--------		---CONSTRUCTION/STUDIES---	
FISCAL YEAR	BUDGETED AMOUNT	FUNDED AMOUNT	BUDGETED AMOUNT	FUNDED AMOUNT
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

AGENCY PROJECT SCHEDULE DATES

	MONTH	YEAR	
DESIGN START:	_____	_____	
DESIGN COMPLETION:	_____	_____	
CONSTRUCTION START:	_____	_____	
CONSTRUCTION COMPLETION:	_____	_____	
FINAL COMPLIANCE:	_____	_____	(Date Navy estimates compliance to be obtained)
REGULATORY FINAL COMPLIANCE:	_____	_____	(Date final compliance must be obtained to satisfy permit requirements/reg date.

POLLUTANT CATEGORY: _ _ _ _ (EFD INPUT) CORRECTIVE ACTION CODE: _ _ _ NEESA INPUT

COMPLIANCE STATUS CODE: (EFDs must circle most applicable code)
ESDP ESDF PSDF ESRO ESRE ESDL CMPA INOV OTHR

PROJECT ASSESSMENT: (EFDs circle one)
HIGH MEDIUM LOW

VARIOUS LOCATIONS: (EFDs circle one)
YES NO

LEGAL ACTION CODE: ____ (EFDs to enter L if project being requested as result of pending legal action. Explain in "Other PCR Information, Section 4.

The following two fields reserved for EFD/NEESA/HQ computer select purposes.
PRIORITY: _ _ _ _ (4 DIGITS) LEGAL CITATION: _ _ _ _ _ _ _ _ (8 DIGITS)

Enclosure (2)

DOCNO: UCO-00698-12.0d-0

PROPOSED PROJECT INFORMATION CONTINUED

NAVFACINST 6240.3B

PROJECT NAME: _____

1. PROBLEM STATEMENT: First 3 lines limited to 50 characters each, brief description of the problem--extracted and submitted to EPA for A-106 Reporting. Follow with detailed description answering the following: specific type of pollution, amount of pollution, pollution source, existing treatment, and effectiveness of existing treatment.

0001 _____
0002 _____
0003 _____
0010 _____
0020 _____
0030 _____
0040 _____
0050 _____
0060 _____
0070 _____
0080 _____
0090 _____
0100 _____
0110 _____
0120 _____
0130 _____
0140 _____

2. REMEDIAL ACTION: First 3 lines limited to 50 characters each, brief description of the problem--extracted and submitted to EPA for A-106 Reporting. Follow with detailed description of control devise or mod proposed to bring pollution source into compliance. Include all applicable specifications for equipment, facility or materials to be utilized.

0001 _____
0002 _____
0003 _____
0010 _____
0020 _____
0030 _____
0040 _____
0050 _____
0060 _____
0070 _____
0080 _____
0090 _____
0100 _____
0110 _____
0120 _____
0130 _____
0140 _____

PROPOSED PROJECT INFORMATION CONTINUED NAVFACINST 6240.3B

PROJECT NAME: _____

3. APPLICABLE STANDARDS: First 3 lines limited to 50-characters each, summation of applicable standards governing the project. Follow with a statement of the specific requirement that is the most stringent requirement applicable to the problem statemalnt. If federal requirement, include federal law, regulation and date of regulation.

0001 _____
0002 _____
0003 _____
0010 _____
0020 _____
0030 _____
0040 _____
0050 _____

4. OTHER PCR INFORMATION: Information contained in this section for internal Navy use only. In addition to items below, include such things as specific project sites (i.e., buildings, specific IR cleanup sites w/associated site titles and costs, etc.), Notice of Violations, if activity is funding design of a project, etc. Also, economic analysis information must be included for all projects submitted requesting Hazardous Waste Minimization funding.

0001 ACTIVITY POC: A/V: _____
0002 DATE OF STEP II: _____
0003 EFD EIC: A/V: _____
0010 NAVFACHQ REVIEWING ENGINEER: _____
0020 _____
0030 _____
0040 _____
0050 _____
0060 _____
0070 _____
0080 _____
0090 _____
0100 _____
0110 _____
0120 _____
0130 _____
0140 _____
0150 _____
0160 _____

Notes:
(1) Additional lines may be added as necessary in Sections 1 thru 4 of this exhibit.
(2) For additional information on "Step II " documentation required for Special Projects funding, refer to OPNAVINST 11010.20E (Facilities Projects Manual).

EXHIBITS COMPLETED INCORRECTLY WILL BE RETURNED TO THE SUBMITTING EFD.

Doc. No.: CLEJ-00594-12.04-12/11/80
2 COPIES
REC'D BY ADJ
23 JAN 81

DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380

FAC [redacted]

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MCBul 6280
LFF-2-ncs
11 Dec 1980

MARINE CORPS BULLETIN 6280

From: Commandant of the Marine Corps
To: Distribution List

Subj: Past Hazardous Waste Disposal Sites--Preliminary Survey for the Navy Assessment and Control of Installation Pollutants Program

Ref: (a) MCBul 6280 of 1 May 1980

Encl: (1) Marine Corps Activity Disposal Site Fact Form

Report Required: Activity Disposal Site Fact Form (Report Symbol DN-6280-02), par. 3

1. Purpose. To provide additional guidance regarding the Navy Assessment and Control of Installation Pollutants (NACIP) Program, to advise addressees of their selection after an initial screening process as the initial Marine Corps activities reviewed under this program, and to request data to be used for prioritizing the onsite review by the NACIP team.

2. Discussion

a. National concern regarding hazardous wastes (HW's) has been expressed in two areas: the continuing disposal of day-to-day generated HW's and the past environmental effects of buried or dumped HW's. The reference established the Marine Corps program in accordance with recently promulgated Environmental Protection Agency (EPA) regulations on the day-to-day handling and disposal of HW's. A program at Marine Corps activities for the assessment of past disposal practices will be largely accomplished by the Naval Facilities Engineering Command (NAVFACENGCOM) under the direction of the Chief of Naval Material.

b. This Bulletin is forwarded to initiate the study for the selection of the first Marine Corps activities to be reviewed (receive the initial assessment study) under the NACIP Program. To establish the sequence in which the overall Department of Navy assessments will be conducted, a "fact form" has been developed and is provided as the enclosure.

3. Action. Addressees shall take necessary action to have the enclosed form completed by those personnel most knowledgeable about the past disposal practices at the facility. Completed forms shall be forwarded to the Commandant of the Marine Corps (Code LFF) by 30 January 1981, with copies provided to the cognizant NAVFACENGCOM field division and the Naval Energy and Environmental Support Activity, Port Hueneme, California 93043. Addressees will be contacted regarding coordination for the onsite review. Report Symbol DN-6280-02 is assigned to this report.

PCN 102 094920 00

4. Self-Cancellation. 31 December 1981.

H. A. Hatch

H. A. HATCH
Deputy Chief of Staff
for Installations and Logistics

DISTRIBUTION: 2020001, 004/3700001, 002/6025002/7230001/81450004, 005 (2)

Copy to: 7000162 (5)
9508111, 113, 115, 117, 174/Naval Energy and Environmental Support Activity (NAVEESA), Code 212, Port Hueneme, CA 94043 (2)
2005/7000144/8145001 (1)

Doc NO: CLEJ-00594-
12.04-12/11/80

MCBul 6280
11 Dec 1980

MARINE CORPS ACTIVITY DISPOSAL SITE FACT FORM
(Report Symbol MC-6280-02)

1. A Marine Corps bulletin in the 6280 series describes the Marine Corps program to assess and control environmental effects of abandoned HW disposal/dump sites at Marine Corps activities. The program will be accomplished chiefly by the NAVFACENGCOM under the direction of the Chief of Naval Material; however, support is required from Marine Corps activities.

2. This fact form (forwarded as appendix A to this enclosure) has been developed to obtain basic information relative to past HW disposal practices at your activity. The information will be used to establish priorities and initial input for further efforts described in the previously referenced Marine Corps bulletin in the 6280 series.

3. This fact form seeks information about disposal practices at your activity with respect to chemicals and other special wastes. The fact form is not concerned with the disposal of trash, garbage, and other conventional solid wastes. Information is specifically sought on past disposal operations which may have been closed but which still represent a possible threat to the environment. Assistance in completing the fact sheets is available from NAVFACENGCOM field divisions.

4. The fact form has been divided into the following sections:

a. Section I.--General Information. Questions seek basic information about the activity and its environs.

b. Section II.--Disposal of Special Wastes. Questions deal with identification of active and past disposal sites at the activity.

c. Section III.--Detailed Disposal Information. Specific information is sought concerning each disposal site identified in section II. If no sites are identified, this section will not be completed.

5. The fact form will be completed by 30 January 1981 and forwarded to the Commandant of the Marine Corps (Code LFF). Copies should also be forwarded to the cognizant NAVFACENGCOM field division and the Naval Energy and Environmental Support Activity (Code 212), Port Hueneme, California 94043.

ENCLOSURE (1)

12.04-12/4/80

ACTIVITY _____

UIC _____

SECTION I. GENERAL INFORMATION

Person compiling this information:

Name _____

Code _____ Telephone _____

1. When was the activity first established? _____

2. Briefly describe the activity's mission. _____

Has this always been the activity's mission? If not, describe previous missions and when they were changed. _____

3. Estimate the activity's equivalent population. _____

Equivalent Population = activity residents + 1/3 x (employees who commute in).

4. Describe the activity's location, including:

a. Location within state (e.g., northeastern corner near Podunk) _____

b. Lies in a generally rural or urban setting? _____

5. Does the activity have any of the following operations (check the appropriate boxes)?

Ship Repair	☐	Pest Control	☐
Aircraft Rework	☐	Disaster Control	☐
Aircraft Intermediate Maintenance	☐	Power Generation	☐
Motor Vehicle Maintenance	☐	DPDO Salvage Yard	☐
Ordnance/Demil	☐	Hospital, Dispensary	☐
		Firefighting Training	☐

Laboratory ☐ What kind? _____

Appendix A to
ENCLOSURE (1)

Doc No. 0295-0054-
12.04-12/11/80

ACTIVITY_____ _____

UIC_____

Any other industrial operations? Please list. _____

_____

Were any industrial operations conducted in the past which have since been discontinued? If so, please list along with the year discontinued._____

_____

_____

6. Additional Comments _____

_____

_____

_____

_____

_____

_____

_____

_____

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MCBul 6280
11 Dec 1980

ACTIVITY_____

UIC_____

SECTION II. DISPOSAL OF SPECIAL WASTES

This section of the fact form will ask about waste disposal sites that are or have been operated by the activity. If a disposal site(s) is identified in this section, section III should be filled out.

To complete this section (and section III, if necessary), activity records should be examined and knowledgeable activity personnel should be interviewed. Long-time activity employees will be invaluable in this effort, since they will be familiar with past disposal operations. If deemed necessary to accurately complete this section, preliminary field investigations may also be performed (however, this fact form does not warrant extensive investigations such as soil borings and waste analyses).

1. Have any of the following techniques ever been used to dispose of chemicals or special wastes on base? Do not include trash or garbage (check the appropriate boxes).

	Operations Present/Past
Solvent Pit	☐ ☐
Acid/Caustic Pit	☐ ☐
Slurry (Chemical Mixtures) Pit	☐ ☐
Waste Oil/Oil Sludges Pit	☐ ☐
Evaporating Pit	☐ ☐
Grease Pit	☐ ☐
Surface Spreading	☐ ☐
Open Burning (Examples: Firefighting Training, Ordnance Waste)	☐ ☐
Incinerator	☐ ☐
Land Disposal with State Permit	☐ ☐

Any other disposal operations?* Please explain_____

_____

_____

_____

*Do not include industrial waste treatment/pretreatment facilities that are subject to pretreatment regulations or NPDES permits. Disposal of industrial sludge should be included, however.

Appendix A to
ENCLOSURE (1)

Doc No: CLEJ-00594-
12.04-12/1.1/80

ACTIVITY _____

UIC _____

2. The following questions are intended to find out whether small-scale disposal of chemicals or special wastes (whether intentional or not) may have occurred at the activity. If the activity has ever run an operation listed below, check the box in column 1 (some of these operations may have been noted in section I). If a box in column 1 is checked, go to column 2 and check the box if the answer to the question in column 2 is "yes."

	Column 1		Column 2
Refuse disposal site	☐	Did this site ever receive chemicals or special wastes?	☐
Pest control shop	☐	Have pesticides or pesticide rinsates ever been disposed of anywhere on a regular basis?	☐
Firefighting training using open burning	☐	Were substances other than oil (e.g., solvents) burned?	☐
Ordnance operations	☐	Were ordnance wastes ever disposed of on base?	☐
Storage of chemical materials or special wastes in a specified area	☐	Have these materials ever leaked or otherwise escaped confinement?	☐

3. Section III should be completed for each disposal site identified in question 1 of this section. Section III should also be filled out for any significant disposal site identified in question 2. If the activity has NEVER disposed of chemicals or special wastes on base, completion of section III is not required.

4. Have any accidents involving hazardous materials ever occurred at the activity? If so, briefly describe the incidents.

_____

_____

_____

_____

_____

_____

_____

DocNo: CLEJ-00594-
12.04-12/11/80

ACTIVITY _____

UIC _____

5. Are/were there any chemical or special waste disposal sites run by organizations outside the activity's fenceline which may present a current hazard to on-base personnel? Did the activity ever operate disposal sites on property which has since been excessed? Please explain.

6. In answering the questions in this section, was reliable information available on past operations? How far back in the past? What sources were used? Please explain.

7. Additional comments _____

Doc No: CLEJ-00594-12.04-12/11/80

ACTIVITY _____

UIC _____

SITE NUMBER _____

SECTION III. DETAILED DISPOSAL INFORMATION

This section should be completed only if active or past disposal sites were identified in section II. Section III should be completed for each site. As an example, say your activity has three sites. Make three copies of section III and complete them. Assign a number to each site (1, 2, and 3) and enter it in the upper right-hand corner.

1. Is this disposal site currently in operation or has it been closed? _____

Years of operation: From _____ To _____

2. What is/was the name of the site (e.g., slurry pit)? _____

3. Where is/was the site located (provide a description and give activity map coordinates)?

4. Describe how the site is/was operated. _____

DocNo: CLEJ-00594-12.04-12/1/80

ACTIVITY _____

UIC _____

SITE NUMBER _____

5. If the site was closed, briefly describe the closure procedures. _____

6. As well as possible, describe the wastes that entered the site.

Type of Waste	Quantity	Origin

Doc No: CCLJ-00597
12.04 - 12/11/80

ACTIVITY _____

UIC _____

SITE NUMBER _____

7. Describe the site's hydrogeology, including information on terrain, soils, water table depth, groundwater quality, nearby surface waters, etc.

8. Briefly describe animal and plant life surrounding the site, including any peculiarities (e.g., dying plants).

9. Do personnel live or work near the site? Please explain. _____

Doc No: CLEJ-00574.
12.04-12/11/80

ACTIVITY _____

UIC _____

SITE NUMBER _____

10. Have there been any incidents or complaints concerning this site? Explain.

11. How close is the site to the activity's boundaries? _____

12. Additional comments _____

Doc. No.: CLET-00581-12.04-08/17/8:

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
200 STOVALL STREET
ALEXANDRIA, VA 22332

IN REPLY REFER TO
1121B/PAP
17 AUG 1982

From: Commander, Naval Facilities Engineering Command

Subj: Responsibilities and Fund Sources for Clean-up of Hazardous Waste (HW) Disposal Sites

Ref: (a) OPNAVNOTE 6240 Ser 45/733503 of 11 Sep 80
(b) OPNAVINST 11010.20D of 8 Mar 79
(c) OPNAVINST 6240.3E of 5 Jun 77

Encl: (1) CNO Ltr Ser 451/399355 of 17 Dec 81
(2) CNO Ltr Ser 925C4/331028 7040/EIP of 23 Jul 82

1. Enclosure (1) defines responsibilities and funding sources for clean-up of hazardous waste (HW) disposal sites. The purpose of this letter is to emphasize the role of the EFD and provide clarification and additional guidance concerning funding aspects of such clean-up actions.

2. Reference (a) established the Navy Assessment and Control of Installation Pollutants (NACIP) program to systematically investigate old sites resulting from disposal of HW or spills of hazardous material (HM). EFDs are tasked to provide support to the NACIP program. One specific task is to provide, on a continuing basis, information to this Headquarters and the Naval Energy and Environmental Support Activity (NAVENENVSA) concerning recommended priorities for Initial Assessment Studies (IASs) for Navy and Marine Corps shore activities in their geographic area. The IAS schedule may be revised at the recommendation of the EFD. However, if physical evidence of a problem becomes known at a site not programmed for near-term investigation through the NACIP program (e.g., contaminated leachate production visible at an old site), then remedial measures may be developed by the activity, with the active assistance of the EFD.

3. Paragraphs 4.b. and 5.a. of enclosure (1) state that centrally-managed Pollution Abatement (P/A) funds shall pay for clean-up of "old" HM spills or past HW disposal sites. This statement does not preclude the use of other funding sources for such clean-up efforts. Further, reference (b) states that Navy industrial funded (NIF) activities responsible for accomplishing clean-up shall fund the clean-up as a normal cost of operation. Therefore, NIF funds will be used for clean-up of an off-station site where the NIF activity contracted for disposal and the owner or operator of the site cannot be identified, or is financially incapable of clean-up, and for clean-up of disposal sites on property owned by a NIF activity. However, P/A funds are intended to be used for IAS investigations and Confirmation Studies at all activities, including NIF activities.

DOC NO: CLEJ-00581 - 12.04-
08/17/82

Subj: Responsibilities and Fund Sources for Clean-up of Hazardous Waste (HW) Disposal Sites

4. With respect to enclosure (1), the following guidance pertains:

a. It is not intended that P/A funds be used to initiate remedial actions at sites where in situ conditions pose no imminent and substantial danger to public health or the environment. The IAS will document these old disposal sites for EFD and activity planners and real estate specialists to assure that planning, programming, and real estate excessing/disposal actions assess the effects of special conditions at the site. Unusual site conditions documented during an IAS should be considered in the development of the scope of any projects proposed at such sites. Additional costs resulting should be identified in the project documentation.

b. Much of the effort associated with clean-up of old dump sites is of an operational nature, for which project documentation (Step I and Step II) and approval is not required. This would include almost all actions taken by and at the discretion of an activity or contractor charged with responsibility for clean-up of a site, so long as those actions do not constitute construction or improvement of a permanent Navy-owned real property facility or structure that must be maintained by the Navy on a permanent basis. Removal of contaminated earth, or excavating a temporary trench to collect contaminated ground water during either government or contractor clean-up efforts are also operational requirements.

c. Some judgment must be exercised in the determination of the intent of a particular clean-up action. In the near term, the installation of a fence around the site may be required to protect equipment and control access to the site during both the construction and operational phases of the site clean-up. This temporary requirement is an operational expense to the activity or contractor. However, upon completion of the clean-up effort, conditions may exist at the site which dictate the long term need for permanent security fencing. Whenever possible, this decision should be made in the initial scope development of the clean-up effort, and work associated with permanent facilities categorized as construction. Modification of existing facilities to provide measures for the correction of such problems are also considered construction.

d. Equipment (Class III Plant Property) installed for a clean-up operation will follow the rules for procurement and equipment installation. The installation of the equipment may require a project if the funding level exceeds the Commanding Officer's approval authority. Contractor or government-furnished equipment used for clean-up of a site is properly chargeable to the clean-up; no facility project is required.

5. Clean-up of such sites is a contingency requirement for which funds cannot readily be programmed in the budget. Reprogramming actions may become necessary during an execution year in order to provide adequate P/A funding. Therefore, NAVFACENGCOMHQ (112) should be notified by the EFD and/or the activity as soon as a potential clean-up situation is known. A Pollution Control Report exhibit should be initiated and submitted for approval at the earliest possible time.

DOC NO: CLEJ - 00581 - 12.04
08/11/82

F 114 OP-45
1143

Subj: Responsibilities and Fund Sources for Clean-up of Hazardous Waste (HW) Disposal Sites

6. The EFDs are tasked by CNO in reference (c) to provide technical advice and assistance to Navy installations in environmental engineering, including clean-up of spills and past disposal sites. EFDs (Code 114s) should aggressively pursue all aspects of clean-up solutions, including defining scope, evaluating alternative treatment, negotiating with regulatory agencies, assisting in cost estimating and contract bid package preparation, participating in A&E/contractor selection, and monitoring remedial construction to the maximum extent feasible, in order to assure cost-effective and timely clean-up in these sensitive cases.

E. R. Oscarson

E. R. OSCARSON
Deputy Commander for
Facilities Management

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Doc NO: CLEI-00581-12.0
08-11/82

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, DC 20350

IN REPLY REFER TO
Ser 451/399355
17 December 1981

From: Chief of Naval Operations
To: Distribution

Subj: Responsibilities and Fund Sources for Clean-up of Hazardous Waste (HW) Disposal Sites and Hazardous Material (HM) Spills

Encl: (1) HW Disposal Sites - Clean-up Scenarios and Funding Aspects
(2) Clean-up of HW Sites and HM Spills Responsibilities and Funding

Ref: (a) Resource Conservation and Recovery Act, 42 USC 6901
(b) Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("Superfund")

1. In the past, some Navy activities may have occasionally disposed of hazardous wastes (HW) by burial on Navy land, or contracted to have it disposed of off station. These were generally lawful practices at that time. Only recently have the potentially serious environmental effects of such practices been recognized. Similarly, the accidental spilling of hazardous materials (HM) can have serious environmental consequences.

2. Recently enacted laws have established very stringent requirements concerning current disposal practices (reference (a)) and clean-up responsibilities for HW disposal sites and HM spills (reference (b)). It is Navy policy to react responsibly and rapidly in HW/HM clean-up situations as public concern is very high and environmental damage is always a consideration. The purpose of this letter is to define clean-up responsibilities and the sources of funds for such actions.

3. HW Disposal Site Clean-up. There are two basic situations:

a. A Navy installation has, in the past, contracted for hazardous waste disposal at an off-station private or commercial disposal site. In the event of subsequent contamination, or imminent contamination, the operator and/or owner of the site is responsible for any clean-up actions. However, if the operator and/or owner cannot be identified, or is financially incapable of clean-up, the activity that contracted for the disposal may be liable for clean-up. This, of course, can be a legally complicated situation which, among other things, will involve a case-specific determination of Navy liability and identification of that portion of the wastes at the site that were generated by the Navy.

b. A Navy installation or a tenant on the installation has disposed of HW on land that is now owned by the Navy, and such

ENCLOSURE (1)

HW disposal is found to cause environmental contamination, or be an imminent danger to the environment.

4. Responsibilities for clean-up of HW disposal sites are as follows:

a. The activity that contracted for off-station disposal (paragraph 3a) has the basic responsibility for accomplishing clean-up if the owner or operator of the disposal site cannot be identified, or is financially incapable of clean-up. In the paragraph 3b on-station disposal situation, the installation that owns the disposal site area is responsible for any required clean-up. In all instances, technical assistance in arranging for the clean-up is available from Engineering Field Divisions (EFD) of the Naval Facilities Engineering Command (NAVFACENGCOM).

b. In cases involving the clean-up of past HW disposal sites, either on or off-station, funding shall be from centrally managed Pollution Abatement Resources administered by COMNAVFACENGCOM. Enclosure (1) provides the proper appropriation and limitations applicable to typical HW clean-up scenarios, and enclosure (2) tabulates clean-up and funding responsibilities.

5. HM Spills. The clean-up of HM spills typically involves the functions of removal of contamination, containerization and disposal of contaminated residue, and site restoration. Responsibilities are as follows:

a. Responsibility for all clean-up functions for "old" spills, (those that occurred before 1 January 1981) rests with the installation on whose property the contamination exists. Funding for clean-up of "old" spills, shall be from centrally managed pollution abatement funds administered by COMNAVFACENGCOM.

b. Responsibility for all clean-up functions for spills which occurred in the 1 January 1981 to 1 October 1982 time frame rests with the installation on whose property the contamination exists. Funding for the clean-up shall be by the spilling activity, whether Navy or non-Navy.

c. The Defense Logistics Agency (DLA) has been assigned to program for disposal of residues from HM spills that occur in FY83 and later. Thus, beginning 1 October 1982, responsibility for removal and containerization of contaminated residue and site restoration continues to rest with the installation on whose property the contamination exists; however, DLA has responsibility for final and proper disposal (including funding) of properly identified and containerized residue. Funding for the removal and containerization of contaminated residue and site restoration shall be by the spiller, whether Navy or Non-Navy.

d. Installation Commanders/Commanding Officers may delegate clean-up functions, as appropriate, e.g., delegation to the spiller who may be particularly expert in handling the spilled material.

DOCNO. CLEJ-00581-14.01
08/11/82

6. Enclosure (2) provides a tabular description of HM spill clean-up and funding responsibilities.

7. It is imperative that funding requirements for those cases that are to be funded from the centrally managed pollution abatement program, as set forth in paragraphs 3, 4, and 5, be made known to COMNAVFACENGCOM as soon as the requirement for clean-up is known. Such requirements shall be forwarded to the appropriate NAVFACENGCOM EFD by message and copies provided to COMNAVFACENGCOM, the Chief of Naval Material, and the Chief of Naval Operations.

W. J. COWHILL
Deputy Chief of Naval
Operations (Logistics)

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HW DISPOSAL SITES - CLEANUP SCENARIOS AND FUNDING ASPECTS

SCENARIO	APPROPRIATION	DOLLAR LIMITATION	RATIONALE
A. Navy hires contractor to:			
1. Evaluate HW contamination, determine appropriate solution, design equipment, etc., for solution, and/or	O&M	None	Does not involve acquisition of new facilities
2. Enter Navy owned site at which HW is buried, dig it up, categorize it, containerize it, have it hauled away to an approved disposal site and dispose of it therein, and/or	O&M	None	Does not involve acquisition of new facilities
3. Bring in potable water treatment equipment and pumps, operate the equipment for several years to pump water from the soil, treat it to remove contaminants, and return it to the soil, and/or	O&M	None	Does not involve acquisition of new facilities
4. Dig a trench and place a clay barrier in the trench to intercept contaminant-laden ground water, and/or	O&M	None	The clay barrier and the clay cap are not "real property improvements"
5. Place a clay or asphalt cap over the HW site, and/or	O&M	None	
6. Drill monitoring (test) wells to take groundwater samples and prove groundwater is/is not polluted, and/or	O&M	None	The test wells are <u>not</u> for water production and do not add to the capability of any facet of the activity. The fence also does not add to the capability of the activity.
7. Build a fence around the contaminated site.	O&M	None	

SCENARIO	APPROPRIATION	DOLLAR LIMITATION	RATIONALE
B. Navy:			
1. Builds utilities and roads to contractor facilities described above and/or 2. Builds a water treatment facility to pump water from the soil, treat it to remove contaminants, and return the water to the soil and or	O&M or MILCON	O&M-$100K MILCON-None	Minor construction (O&M)
3. Pays to a state HW control agency funds to cover the Navy share of a state clean up of an off-station site used by many other dumpers. The state clean up involves all features described in A1-A6.	O&M	None	Does not involve acquisition of new facilities

DOC NO. CLEJ-00581-12.07-
08/17/82

CLEAN UP OF HW SITES AND HM SPILLS

RESPONSIBILITIES AND FUNDING

SITUATION	CLEAN UP RESPONSIBILITY	FUNDING RESPONSIBILITY
Past Contracted off-installation Disposal (para 3.a.)	Activity which contracted for the disposal	NAVFACENGCOM Pollution Abatement
Past on-installation Disposal (para 3.b.)	Installation	NAVFACENGCOM Pollution Abatement
HM Spill on Navy installation prior to 1 Jan 81	Installation	NAVFACENGCOM Pollution Abatement, if spill by Navy. If spill by others, funding by others.
HM Spill on Navy installation after 1 Jan 81	*Installation	*Spilling activity, whether Navy, or non-Navy

*See paragraph 5.c. Beginning 1 October 1982, DLA is responsible for final and proper disposal of residue.

Enclosure (2)

DOC NO: CLEJ-00581-12.0
08/17/82

DEPARTMENT OF THE NAVY
OFFICE OF THE CHIEF OF NAVAL OPERATIONS
WASHINGTON, D.C. 20350

IN REPLY REFER TO:
Ser 925C4/331028
7040/EIP

23 JUL 1982

From: Chief of Naval Operations
To: Distribution

Subj: Funding the Clean up of Hazardous Waste (HW) Disposal Sites and Hazardous Material Spills

Ref: (a) CNO ltr Ser 451/399355 of 17 Dec 81

1. Clarification of the funding responsibilities established in reference (a) is required with respect to Navy industrial funded (NIF) activities.

2. The funding responsibilities given in paragraphs 4b and 5a of reference (a) are correct as given, except that where a NIF activity is responsible for accomplishing the clean up, such activity shall also be responsible for funding the clean up as a normal cost of operations.

R. A. MILLER
REAR ADMIRAL, USN
By direction

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Doc. No.: CLEJ-00593-12.04-03/10/87

UNITED STATES MARINE CORPS
Marine Corps Base
Camp Lejeune, North Carolina 28542-5001

BO 6240.5A
NREAD/st
10 Mar 1987

BASE ORDER 6240.5A

From: Commanding General
To: Distribution List

Subj: HAZARDOUS MATERIAL DISPOSAL PROGRAM

Ref: (a) Resource Conservation and Recovery Act (Pub No. 94-580) (42 USC 6901-6987) (NOTAL)
(b) EPA Regulations contained in Code of Federal Regulations, Title: 40 Parts 260-265 (NOTAL)
(c) DOT Regulations contained in Code of Federal Regulations, Title: 49 Parts 100-179 (NOTAL)
(d) BO 11090.1B
(e) BO 11320.1G

Encl: (1) Procedures for Collection, Storage and Turn-In of Hazardous Material and Hazardous Waste for Disposal
(2) Responsibilities for Hazardous Material/Hazardous Waste Disposal
(3) Hazardous Waste Training Requirements and Guidelines

1. Purpose. To revise responsibilities, procedures and guidance for hazardous material (HM) and hazardous waste (HW) disposal and related environmental protection for the Camp Lejeune and Marine Corps Air Station, New River complex.

2. Cancellation. BO 6240.5.

3. Background

a. Congress and the state legislatures have responded to the threats to human life and the environment caused by mismanagement and illegal spilling and dumping of toxic substances by enacting laws which not only attempt to avert future threats but which impose civil and criminal penalties. In enacting many of these environmental laws, Congress waived federal supremacy, requiring federal agencies including the Marine Corps, to comply with federal, state and local environmental laws. Federal officers and employees now face the possibility that they may be personally liable for civil and criminal penalties and fines as well as imprisonment.

b. The Environmental Protection Agency (EPA) has authorized the State of North Carolina to enforce the requirements of references (a) and (b) through a state HW regulatory program. The Solid and Hazardous Waste Management Branch, Division of Health Services (DHS), is the primary enforcing agency within North Carolina. DHS enforcement personnel have authority to investigate HW spills and perform routine inspections of work sites where HW are handled and stored. These investigations and inspections can result in citations being issued to supervisors and/or personnel at the work site for civil and/or criminal violations of HW regulations.

c. State regulations promulgated under reference (a) and EPA regulations contained in reference (b) require both initial and annual refresher training for personnel involved in HW management and handling. The majority of discrepancies identified during EPA and DHS inspections can be directly, or indirectly, attributed to lack of adequate HW training. The relatively rapid rate of personnel turnover within the Camp Lejeune Complex requires that HW training be readily available. Publishing of this revised order is an essential step in strengthening the subject program. In addition to addressing the HW training issues, this revised order provides for the following: (1) better internal controls by organizations generating and handling HW; (2) improved availability of HW related supplies and equipment and; (3) formalizing efforts to reduce the volume and toxicity of HW generated within the Camp Lejeune Complex. Enclosures (1) through (3) outline revised procedures for managing HW and providing compliance with related requirements of references (a), (b) and (c).

Doc No: CCEJ-00373 —
12.04-031.0/87

d. This order formally establishes two collateral duty positions to coordinate and to assist with the implementation of the subject program. These positions are the Hazardous Material Disposal Coordinator (HMDC) and Hazardous Material Disposal Officer (HMDO). HMDC will be established within each major command and within Marine Aircraft Groups. HMDO's will be appointed at the Battalion, Separate Company and Squadron level (or equivalent). HMDC and HMDO responsibilities are outlined in enclosure (2). The appointment and training of qualified primary and alternate HMDCs and HMDOs are essential to implementation of the complex requirements of the subject program.

4. Action

a. Organizational commanders shall on a continuing basis take action required to implement the following HW management goals and objectives:

(1) HW operations will be supervised by properly trained personnel who have access to equipment and supplies required for handling HW.

(2) Written descriptions of HW duties will be developed for all HW managers and handlers, and appropriate records maintained to document that proper training is being provided to personnel in accordance with enclosure (3).

(3) OIC/NCOIC's will ensure that HW facilities are inspected weekly and timely corrective action is taken and properly documented per this Order and related instructions of HMDO/HMDC.

(4) OIC/NCOIC's will prepare a written HW management Standard Operating Procedure (HWMSOP) in cooperation with HMDO for each facility where HW are routinely handled and stored. SOP will be readily available at HW generation and storage sites.

(5) A system of continuous internal controls will be implemented to ensure that violations of this Order are identified and if appropriate, that disciplinary action is taken to discourage recurring violations.

b. Major commands will take action required to limit HW generation to the minimum number of locations practical, to identify HW handling and storage equipment and facilities requirements and to develop and implement a system of internal controls which provides satisfactory compliance with the requirements of this Order and related regulatory requirements. As a minimum the following action will be taken:

(1) Appoint a primary and alternate HMDC with authority and resources to implement duties outlined in enclosure (2).

(2) Maintain a current listing/directory of facilities where HW are handled and stored. Ensure timely submission of waste identification documents per enclosure (1).

(3) Require OIC/NCOIC's of HW handling and storage facilities to develop and implement a written HW SOP for each facility per enclosures (1) and (3). The SOP will be readily available to personnel routinely handling HW and related emergency response.

(4) Require Commanding Officers of each Aircraft Squadron, Regiment, Battalion and Separate Company (or equivalent) to appoint a primary and alternate HMDO with authority to carry out the duties outlined in enclosure (2).

(5) Establish and promote HW management goals and objectives for supply and maintenance functions which promote the minimization of the volume and toxicity of HW generation.

(6) Within 30 days of the date of this Order, and as requested thereafter, provide a current listing of Primary and Alternate HMDO's. The list shall contain name, rank, unit and phone number. The list will be provided to the Director, Natural Resources and Environmental Affairs Division, Marine Corps Base.

c. Director, Natural Resources and Environmental Affairs Division, will inspect all points of HW generation on an annual basis, or more frequently as required, to monitor and evaluate compliance with the order and related state/federal regulations. The results of the annual inspections will be provided in writing to the inspected activity via the chain of command.

d. The Assistant Chief of Staff, Logistics and Assistant Chief of Staff, Facilities will cooperate with the local Defense Reutilization and Marketing Officer in improving HW disposal services to organizations generating HW subject to this Order.

e. Officials responsible for the preparation, awarding and implementation of various types of contracts, shall ensure that all contractor activities are carried out in accordance with the requirements of this Order and related State and Federal regulations.

5. Concurrence. This Order has been coordinated and concurred in by the Commanding Generals, II Marine Amphibious Force, 2d Marine Division, FMF, 2d Force Service Support Group (Rein), FMF, 6th Marine Amphibious Brigade, FMF, and the Commanding Officers, Marine Corps Air Station, New River, Naval Hospital and the Naval Dental Clinic.

M. C. HARRINGTON
Chief of Staff

DISTRIBUTION: A
NREAD 300

PROCEDURES FOR COLLECTION, STORAGE AND TURN-IN OF HAZARDOUS WASTE (HW) AND HAZARDOUS MATERIAL (HM) FOR RECYCLING OR DISPOSAL

1. Hazardous Waste Management Standard Operating Procedures (HWMSOP). Each organization routinely generating or handling HW or disposing of HM will develop desk top procedures to be followed. As a minimum, the HWMSOP will provide the following:

a. Name and telephone number of cognizant Hazardous Material Disposal Officer (HMDO) and Hazardous Material Disposal Coordinator (HMDC).

b. A copy of BO 6240.5A, BO 11090.1B, BO 11090.3, and related local instructions.

c. Name, title, HW duties and HW training records for each employee per enclosure (3) of BO 6240.5A.

d. Waste Identification Document (WID) for each HW generated or handled. WID will be completed in accordance with attachment (A) of this enclosure.

e. Procedures and responsibilities for dealing with HW/HM spills and related emergencies, i.e., HW Spill Contingency Plan.

f. Copies of weekly inspections of HW storage areas/containers.

g. Guidance provided by HMDO/HMDC's to implement HW/HM disposal program.

h. Location sketch for each HW generation, accumulation and storage area.

i. Material Safety Data Sheets, or hard copy of Hazardous Material Information Systems Data developed per MCO 5100.25 for all HW generated.

j. Sample copies of completed turn-in documents (Form DD-1348-1) and HW labels for each type of HW generated and disposed of.

2. HM/HW Collection and Storage Procedures/Requirements.

a. Possession of a properly completed and signed WID constitutes authorization to generate the specifically named HW. Failure to submit a WID to HMDC within 30 days of date HW first generated or handled or 60 days of the date of this Order (whichever is later) will be considered a violation of this Order. HMDC's are responsible for monitoring and enforcement of this requirement.

b. Only Department of Transportation (DOT) approved containers labeled per WID or HWMSOP will be used for storage of HW awaiting disposal. HMDO's are responsible for enforcing this standard.

c. All personnel routinely handling or responsible for HW management must be properly trained per this Order and references (a) and (b). OIC's are responsible for maintaining training records for personnel within their cognizance. HMDC's are responsible for enforcement of this requirement.

d. All HW containers and storage areas will be inspected weekly using format provided by cognizant HMDC/HMDO. A written record of corrective action will be maintained per HMDO/HMDC guidance. Director, Natural Resources and Environmental Affairs Division, (NREAD), MCB will assist HMDC/HMDO develop guidelines.

e. Spills of HW/HM will be promptly reported to the Base Fire Department at the Emergency Telephone Number 451-3333. OIC's are responsible for maintaining absorbents, safety equipment, and other supplies and equipment required for dealing with minor spills. HWMSOP's will give specific guidance in this area.

f. A Form DD-1348-1 will be completed and submitted to the cognizant HMDO not later than 45 days after the "accumulation start date" on the HW label on the container.

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03/01/87

g. HMDC will be notified by telephone, confirmed in writing, of anytime DRMO has not accepted accountability of a HW within 75 days after the "accumulation start date" on any HW container.

3. Hazardous Material (HM) and Hazardous Waste (HW) Turn-in Procedures. The following steps will be taken to initiate final disposal of HM/HW. At any time that a major problem or controversy arises, the organization attempting to turn-in the item will immediately notify the responsible Hazardous Material Disposal Coordinator (HMDC). The HMDC will be responsible for coordinating efforts to resolve the problem/controversy and will utilize the assistance of the Director, Natural Resources and Environmental Affairs Division (NREAD), Facilities Department, Marine Corps Base, telephone extension 2083, 2195. Unresolved problems/controversies will be referred to the Assistant Chief of Staff, Facilities, Marine Corps Base. See Note 1 below.

STEP 1. The Officer in Charge (OIC) of the organization having physical custody of HM/HW is responsible for turn-in of HM/HW unless otherwise specified by HMDC. OIC will properly containerize the HM/HW and submit a Form DD 1348-1 to the cognizant Hazardous Material Disposal Officer (HMDO) per instructions in organization's HWMSOP. Questions not addressed by HWMSOP will be directed to HMDO.

STEP 2. The HMDO will physically inspect the HM/HW and determine if the Form DD 1348-1 is properly completed and the HM/HW is properly packaged. The HMDO will coordinate correction of any problems. Unresolved problems will be referred to cognizant HMDC for resolution. Once problem's resolved, HMDO will forward (preferably hand deliver) the Form DD 1348-1 to the Defense Reutilization and Marketing Office (DRMO) Headquarters, Bldg. 906. See Note 2 below.

STEP 3. The DRMO will inspect the HM/HW if necessary, and will determine if DRMO is accountable (i.e., responsible) for disposal of the HM/HW. If DRMO determines that the local activity, not DRMO, has responsibility for disposal of the HM/HW, the DRMO will so notify the cognizant HMDC in writing with a copy to the NREAD. The HMDC and NREAD will cooperate in developing case specific procedures for disposal of the item. Assistant Chief of Staff, Logistics, MCB, will provide contracting support.

STEP 4. If DRMO determines that DRMO is accountable for HM/HW, DRMO will determine where the HM/HW will be stored awaiting disposal. HW must be stored at the DRMO facility at TP-451 complex, unless otherwise approved by the Assistant Chief of Staff, Facilities, MCB. DRMO will submit a request to the Assistant Chief of Staff, Logistics to arrange transportation of the HM/HW to DRMO designated facility.

STEP 5. Assistant Chief of Staff, Logistics, in cooperation with HMDO, will determine if generating organization can safely, legally transport the item to DRMO designated facility. Assistant Chief of Staff, Logistics will supervise transportation of HW. Whenever practical, Command turning in a HM will provide transportation. Assistant Chief of Staff, Logistics will cooperate with the HMDC for the generating organization in promoting efficient, safe transportation. Spills or other emergencies will be promptly reported to the Base Fire Department at 451-3333. Drivers will be provided written spill prevention and response guidance.

STEP 6. When the HM/HW arrives at storage facility, DRMO will inspect prior to unloading. DRMO is authorized to refuse the HM/HW if any significant discrepancies exist. DRMO will immediately notify cognizant HMDC and NREAD of DRMO's refusal to accept the HM/HW. The transporting vehicle will be secured and will not be moved outside the immediate vicinity of DRMO facility except for emergency situations involving risk to public safety or to property. DRMO, HMDC and NREAD will cooperate in making an immediate decision on corrective action. If problems cannot be promptly resolved the HM/HW will be returned to the generating organizations facilities. When DRMO accepts physical custody of the HM/HW, turn-in is complete.

NOTE 1: Marine Corps Air Station, New River units will follow turn-in procedures set forth in Air Station Order 6280.1_.

NOTE 2: HMDO should maintain a log of documents showing date document accepted by DRMO, accumulation start dates, and the type and quantity of HW.

ENCLOSURE (1)

Doc No. CCEJ-00073-12.0-
03/10/87

BO 6240.5A
10 Mar 1987

WASTE IDENTIFICATION DOCUMENT (WID)

DATE _____

WID # _____

1. GENERATING WORK CENTER INFORMATION

_____

Shop Contact Command Building Phone Ext.

2. WASTE IDENTIFICATION

a. WASTE NAME: Common _____ Chemical(s) _____

_____

b. PHYSICAL FORM: (CHECK) ___Liquid ___Solid ____Sludge ____Other (Specify)

_____

c. MANUFACTURER: _____ d. NATIONAL STOCK NUMBER: _____

e. CONTAINER: (TYPE AND SIZE) _____

f. GENERATION RATE: (e.g., gal/day, lbs/day) _____

g. FREQUENCY OF GENERATION _____

h. EXPECTED ANNUAL GENERATION: (GALS, LBS) _____

i. DESCRIBE WASTE GENERATION PROCESS: _____

_____

_____

j. HAS WASTE BEEN MIXED WITH ANY OTHER MATERIAL? ____ Yes ____ No If yes,

specify _____

_____

3. REASON FOR DISPOSAL: (CHECK)

___Exceeded shelf life ____ Served intended purpose ___ Unused ___ Other

(specify) _____

4. REQUEST FOR WASTE CHARACTERIZATION BY NREAD: I am unable to properly classify the above waste. NREAD assistance is requested. Cost of Laboratory Analysis should be charged to the following Cost Account Code. _____

_____ DATE

HMDO
Signature

5. CERTIFICATION: I certify that the above named materials are the only compounds in the waste containers listed above and have not been mixed with any other materials.

_____ DATE

HMDO
Signature

Appendix A to
ENCLOSURE (1)

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10 Mar 1987

TO BE COMPLETED BY THE HMDC AND COPIES SENT TO THE HMDO, DRMO, AND DIRECTOR, NREAD

6. WASTE CHARACTERIZATION: DATE COMPLETED _____ LAB REPORT # _____

7. WASTE CLASSIFICATION: _____ Hazardous _____ Nonhazardous

8. EPA WASTE NUMBER(S): _____

9. REASON FOR HAZARD CLASSIFICATION: _____

10. HANDLING INSTRUCTIONS: _____

11. DTID 1348-1 REQUIRED: _____ Yes _____ No

12. CONTAINER AND LABELING REQUIREMENTS:

a. DOT/DOD CONTAINER TYPE: _____

b. DOT PROPER SHIPPING NAME: _____

c. DOT HAZARD CLASS: _____

d. UN/NA NUMBER: _____

e. ADDITIONAL REQUIREMENTS: (FOR DRMO) _____

13. SPECIAL PRECAUTIONS AND/OR INSTRUCTIONS: _____

14. _____ Code _____ Date
HMDC Signature

RESPONSIBILITIES FOR HAZARDOUS MATERIAL (HM)/HAZARDOUS WASTE (HW) DISPOSAL

1. Compliance with hazardous waste management and disposal regulations requires the cooperative effort of many functions within the Camp Lejeune complex. The following outlines the responsibilities of various officers and managers relative to hazardous waste management:

a. Hazardous Material Disposal Officer (HMDO) will:

(1) Provide assistance to HW generators and handlers in the preparation and timely submittal of HW turn-in documents per this Order.

(2) Perform quarterly inspections of HW generation and storage sites and notify OIC's of corrective action required. Inspection format developed per paragraph 1b(2) below will be used.

(3) Keep OIC's and key personnel informed of any changes in regulations affecting HW activities within the HMDO's cognizance and ensure that HW standard operating procedures (SOP) are up-to-date and readily available for review by personnel involved in HW management.

(4) Develop a roster of personnel involved in HW management at each work site within the HMDO's cognizance.

(5) Develop and provide HW training requirements to HMDC for personnel within the HMDO's cognizance.

(6) Actively promote the reduction of volume and toxicity of HW produced by organizations within the HMDO's cognizance.

(7) Conduct surveys required to identify HW generation and storage sites within the HMDO's cognizance and provide periodic updates, as requested, to the HMDC.

b. Hazardous Material Disposal Coordinator (HMDC) will:

(1) Provide assistance to HMDO's in handling HW management problems. Serve as HMDO for organizations not having sufficient HW activity to justify appointment of a HMDO.

(2) Perform annual inspection of HW generation and storage sites and notify HMDO's of corrective action required. Inspection format will be developed in cooperation with the Director, Natural Resources and Environmental Affairs Division, (NREAD), Marine Corps Base.

(3) Inform HMDO's of any changes in regulations affecting HW activities under the HMDO's cognizance.

(4) Serve as point of contact on matters pertaining to HW management and implementation of this order within the HMDC's command.

(5) Develop listings of HW generation and storage facilities.

(6) Be responsible for identifying assistance required to provide HW training. Requests for assistance from MCB will be submitted in writing "Attention Director, NREAD."

c. Assistant Chief of Staff, Facilities will:

(1) Have overall responsibility for implementation of the subject program and maintaining compliance with requirements of references (a) and (b) and related local, state and federal regulations.

(2) Have overall responsibility for management of pollution abatement projects per latest revision of MCO P11000.8.

ENCLOSURE (2)

(3) Have overall responsibility for local implementation of Marine Corps programs to correct environmental discrepancies associated with past HM/HW disposal sites.

(4) Ensure that plans and specifications for new facilities provide adequate facilities and collateral equipment for the handling and storage of HM/HW.

d. Director, Natural Resources and Environmental Affairs Division will:

(1) Provide a staff specialist to serve as HMDC for Marine Corps Base.

(2) Provide a command point of contact with state and federal agencies on matters pertaining to the subject program.

(3) Monitor ongoing activities as required to identify, evaluate and provide up-channel reporting of environmental deficiencies related to the subject program.

(4) Coordinate day-to-day implementation of this Order and provide the following types of technical assistance:

(a) Laboratory support, if required, for HW identification.

(b) Training to HMDC's and HMDO's on state and federal environmental laws, regulations and procedures.

(c) Guidance on HM/HW SOP preparation.

(d) Guidance on HM/HW spill prevention, control, cleanup and related HW disposal.

(e) Coordination of HM/HW recycling/minimization program.

(5) Coordinate development and implementation of HW Training Program required for compliance with references (a) and (b).

e. Base Maintenance Officer will:

(1) Collect and dispose of used POL's and oily wastes from collection tanks and other oil pollution abatement facilities in a manner consistent with this Order and references (a) and (b).

(2) Unless otherwise provided, operate and maintain industrial waste collection, pretreatment and disposal facilities within the Camp Lejeune complex in a manner consistent with this order, references (a) and (b) and related State regulations.

(3) Provide HM/HW spill response services in accordance with reference (d).

f. Base Fire Chief will:

(1) Provide HM/HW spill and related emergency services per references (d) and (e) and related HW/HM Spill Contingency Plans.

(2) Provide routine inspections of facilities where HM/HW are stored and handled, and report all discrepancies to cognizant HMDC. Elimination of the following hazards will be stressed:

(a) HM/HW stored in defective containers or containers which are not properly marked with the chemical name, NSN (if appropriate) and hazard label of the contents.

(b) Incompatible HM/HW are stored in a manner with significant potential threat of fire, explosion, or release of toxic fumes or gases due to chemical reaction during spills or leaks.

(c) HM/HW stored in a manner likely to result in a significant discharge to the environment.

g. Assistant Chief of Staff, Logistics will:

(1) Appoint an officer to serve as HMDO for the Logistics Department.

(2) Ensure that suppliers provide hazardous material safety data sheets for all HM procured through open purchase and will provide one copy to unit ordering HM and one copy to the Base Safety Manager.

(3) Ensure local stocking and availability of the following on a reimbursable basis: empty containers; labels; labeling equipment; absorbents; frequently used minor equipment and HM/HW handling supplies required to implement this Order and reference (d).

(4) Provide contracting services required to dispose of HM or HW for which DRMO is not accountable.

(5) Serve as principal agent for the Commanding General on matters pertaining to HM and HW transportation, and will be responsible for:

(a) Monitoring all HW transportation for compliance with requirements of references (a), (b) and (c) and related state and federal regulations.

(b) Providing transportation services and related record keeping required for implementation of this Order and which are not available from the Defense Reutilization and Marketing Officer or the organization generating the HM/HW.

h. Assistant Chief of Staff, Manpower will:

(1) Coordinate for Marine Corps Base the development of a Hazardous Material Information System, per MCO 5100.25. Assist NREAD in providing safety data and related technical support to HMDC's, HMDO's and other cognizant officials as required to implement this Order.

(2) Provide HM related safety training required to implement HW training plans developed in accordance with paragraph 1d(5) of this enclosure.

i. Officer in Charge, Preservation, Packaging (PP&P) Section, 2dFSSG will provide PP&P support (in accordance with established regulations and procedures) to HMDO's, HMDC's, and other HW managers required to accomplish the following:

(1) Identification of type of containers and labeling required for compliance with reference (c) and this Order.

(2) Packaging of HM/HW required for safe storage and transportation during disposal per this Order.

(3) HM transportation certification required for compliance with reference (c).

j. Defense Reutilization and Marketing Officer (DRMO) will:

(1) Operate the base Long-Term Hazardous Waste Storage Facility at the TP-451 complex in accordance with state permit issued under regulations promulgated under references (a) and (b).

(2) Provide HM and HW disposal services to organizations within the Camp Lejeune/MCAS, New River complex in accordance with DOD regulations, references (a) and (b), and related state and federal regulations.

(3) Receive and process HM/HW turn-in documents in a timely manner and provide prompt notification to HMDO's of any document not satisfying applicable turn in criteria or which contain HM/HW for which DRMO is not accountable.

(4) Maintain records of DRMO HM/HW storage and disposal activity in a manner which provides information required for preparation and timely submittal of required reports to state and federal regulatory agencies.

(5) Keeps HMDC's, HMDO's and other cognizant officers informed of changes in DRMO policies and procedures which affect local implementation of the subject program.

k. Commanding Officers of the following Base Commands/Organizations will designate a Primary and Alternate HMDO to carry out duties outlined in 1a and 1b above: Marine Corps Engineer School; Rifle Range Detachment; Field Medical Service Support School; Marine Corps Service Support School; Reserve Support Unit; Infantry Training School; Support Battalion; Headquarters Battalion; Assistant Chief of Staff, Morale, Welfare and Recreation; Assistant Chief of Staff, Logistics, and Base Maintenance Officer within their respective commands/organizations.

DOC NO. UCEJ-00593-12.04-03/10/87

BO 6240.5A
10 Mar 1987

HAZARDOUS WASTE TRAINING REQUIREMENTS AND GUIDELINES

1. Hazardous waste (HW) training is a specific requirement of state and federal regulations promulgated under the Resource Conservation and Recovery Act (RCRA). A review of RCRA requirements and the actual HW activity aboard the Camp Lejeune/Marine Corps Air Station, New River complex indicates that a relatively small percentage of personnel require highly specialized HW training. Generally, the requirements for the remaining personnel involved in HW management are satisfied by routine on-the-job training and related safety and fire-prevention training readily available locally. Providing this training will have minor impact on organizational commanders, in that training required is directly job related. Appendix (A) Part II identifies the minimum HW training required, for personnel identified in Section 2d below.

2. Initial and annual refresher HW training is required for all personnel in this Section. For the purpose of these guidelines, only those personnel directly involved in HW handling, storage and disposal will be subject to the HW training documentation requirements of RCRA. A special HW training record, i.e., Appendix (A) Part I will be developed for the following personnel:

a. All Hazardous Material Disposal Officers (HMDO), Hazardous Material Disposal Coordinators (HMDC), and alternate HMDO's and HMDC's.

b. Defense Reutilization and Marketing Officer (DRMO) and subordinate personnel routinely involved in HW handling, storage, turn-in and disposal.

c. Activity personnel involved in transportation of HW required for the implementation of this Order.

d. Personnel assigned to work places meeting the definition of HW generators, HW accumulation areas or satellite HW accumulation areas and involved in one or more of the following:

(1) Collection, handling, storage and transportation of HW.

(2) Inspection, and related follow-up, of HW handling/storage areas.

(3) Response to HW spills and related emergencies.

(4) Preparation and submittal of HW turn-in documents.

3. Other activity personnel providing professional and technical support to HW management include the following:

a. Fire Protection personnel

b. Safety specialists

c. Environmental staff

d. Industrial hygienists

Preparation of Appendix A for these staff specialists and emergency personnel is not required. Duties and training provided to these individuals will consist of standard position descriptions and civilian personnel records.

4. Responsibility for providing specialized HW training required for compliance with RCRA is assigned to Assistant Chief of Staff, Facilities. The following officials are responsible for notifying Assistant Chief of Staff, Facilities of specialized training requirements of their subordinates and other personnel as shown.

a. The DRMO for self and subordinates

b. The Assistant Chief of Staff, Logistics for subordinates.

ENCLOSURE (3)

c. HMDC's for personnel shown in 2d above within HMDC's cognizance

d. Director, Natural Resources and Environmental Affairs Division (NREAD) for subordinates and primary and alternate HMDC's and HMDO's.

5. Organizational commanders are responsible for developing and implementing plans and procedures to provide RCRA required training and maintain records outlined in Appendix A. Organizational commanders will ensure that all new/newly assigned personnel are provided appropriate HW training and close supervision required to comply with RCRA and applicable personnel safety fire prevention and occupational health standards. Organizational commanders will notify HMDC's of HW training requirements. Notification will include names and addresses of persons to be trained and an accurate description of the training required. HMDC and Assistant Chief of Staff, Facilities representative will coordinate the scheduling and funding of specialized HW training.

6. Records of HW training must be maintained for each employee for three years after employee transferred or terminated, except as follows: if an employee is transferred to a HW related position within the Camp Lejeune/Marine Corps Air Station, New River complex, the HW training records will be transferred to the new organization. Responsibility for maintaining official files of HW training records are as follows:

a. HMDC's will maintain records of HW training for HMDC's, HMDO's and alternate HMDC's and HMDO's within their cognizance.

b. DRMO will maintain HW training records for all employees identified in paragraph 2b above.

c. Assistant Chief of Staff, Logistics will maintain HW training records for all subordinates involved in activities identified in paragraph 2c above.

d. HW training records for all employees identified in paragraphs 2(a) - 2(d) will be maintained on Appendix A, Part I. HMDO will maintain HW training records for personnel identified in paragraph 2(d) above. A copy of training records for personnel identified in paragraph 2(d) above will be maintained in HWMSOP.

PART I

RECORD OF HAZARDOUS WASTE TRAINING

1. Employee Name: _____
2. Job Title/MOS: _____
3. Name of Organization: _____
4. Date this Record Established: _____
5. Description of HW Duty: _____

6. Description of HW Training Completed:

a. Date	b. Description of Training/Name of Trainer	c. Signature and Date

Appendix A [illegible]
ENCLOSURE (3)

Doc No. CLEJ-00575-K
03/10/87

PART I - Description of HW Training Completed - (continued)

a. Date	b. Description of Training/Name of Trainer	c. Signature and Date

PART II

MINIMUM LEVELS AND RECORD KEEPING FOR HAZARDOUS WASTE MANAGEMENT ORIENTATION TRAINING

Personnel routinely handling HW will be provided sufficient on-the-job training to ensure adequate awareness to the items listed below:

(1) The types and characteristics of HM/HW handled.

(2) Applicable activity oil and hazardous substance spill prevention and contingency plan contained in BO 11090.1_.

(3) Organizational procedures and policy for implementation of BO 6240.5.

(4) Procedures to follow in protecting personal safety during HM/HW emergencies.

(5) The HW Standard Operating Procedure for the organization.

(6) The employees specific HW handling responsibilities.

Doc. No.: CLEJ-00577-12.04-07/15/88

DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380-0001

IN REPLY REFER TO
6280/7
LFL/U-14
15 JUL 1988

From: Commandant of the Marine Corps

Subj: INSTALLATION RESTORATION (IR) REQUIREMENTS AND PROCEDURES

Ref: (a) MCO P11000.8B

Encl: (1) CERCLA/SARA/IR Requirements and Procedures

1. Since 1980, the Department of the Navy has been investigating and cleaning up past hazardous waste disposal sites on Navy and Marine Corps installations. The Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended by the Superfund Amendments and Reauthorization Act, requires compliance by Federal Agencies in the same manner and to the same extent as any non-governmental entity. Chapter 4 of the reference assigns basic responsibilities within the Marine Corps for compliance. The enclosure provides detailed requirements and procedures pertaining to the Department of the Navy's compliance program (the Installation Restoration Program) and assigns responsibilities for the effort.

2. The Naval Facilities Engineering Command (NAVFACENGCOM) has been tasked to manage the fiscal and technical aspects of the IR program for the installation commander. However, it is imperative that installation personnel get involved early and remain involved throughout the entire process. Enclosure (1) tasks installations to take the lead on several critical procedural aspects of the program with support from NAVFACENGCOM. Close cooperation between the NAVFACENGCOM Engineering Field Divisions and your installation will be necessary to ensure success. The IR program is funded centrally by the Department of Defense. Resources to carry out installation responsibilities will be provided through the Defense Environmental Restoration Account which is administered by NAVFACENGCOM.

3. Congressional and regulatory oversight of the IR program will remain high. Our goal is to clean up past disposal sites in an expedient and cost-effective manner. Full and open cooperation with regulatory agencies and the public is encouraged.

NEIL J. BROSS
By direction

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12.04-07/15/88

Subj: INSTALLATION RESTORATION REQUIREMENTS AND PROCEDURES

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DOC NO: CLEJ-00577-12.04-07/5/88

CERCLA/SARA INSTALLATION RESTORATION (IR) REQUIREMENTS AND PROCEDURES

Ref: (a) 40 CFR 300, National Oil and Hazardous Substances Pollution Contingency Plan, 20 Nov 85 (50 FR 47912)

1. Legal Basis. The Superfund Amendments and Reauthorization Act of 1986 (SARA) amended the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and made it applicable to all federal agencies. When addressing the cleanup of hazardous waste (HW) disposal sites, Section 120 (a) (1) of CERCLA requires each federal agency to comply with the Act in the same manner and to the same extent, both procedurally and substantively, as any non-governmental entity. The only exceptions pertain to applicable time periods stated in the law for federal facilities and requirements relating to bonding, insurance, or financial responsibility (CERCLA 120(a) (3)). The act further requires that applicable state laws concerning removal actions and remedial actions apply to federal facilities (CERCLA 120(a) (4)). The U.S. Environmental Protection Agency (EPA) regulations and procedures take precedence at National Priorities List (NPL) sites (see paragraph 3d), although state cleanup standards may apply.

2. EPA Program. EPA is responsible for implementing CERCLA by developing and enforcing appropriate regulations. Regulations issued for CERCLA compliance are found in the reference, which is known as the National Contingency Plan (NCP). EPA is also issuing a series of policy memos and procedural guidance which provides detailed information on the remedial process. A compilation of these memos and guidance will form the Federal Facilities CERCLA Guidance Manual. The NCP sets forth the following general procedures for initiating and carrying out the remedial process at CERCLA sites:

a. Site Discovery and Notification
b. Preliminary Assessment/Site Inspection (PA/SI)
c. National Priorities List (NPL) Ranking and Listing
d. Remedial Investigation/Feasibility Study (RI/FS)
e. Record of Decision (ROD)
f. Remedial Design/Remedial Action (RD/RA)
g. Operation and Maintenance (O&M)
h. Long-Term Monitoring (LTM)

3. Requirements and Procedures. Response actions will be conducted in accordance with CERCLA, the NCP, and EPA's guidance. NAVFACENGCOM through its Engineering Field Divisions (EFDs), provides technical and fiscal assistance. Funding is provided by the Congress through

Encl: (1)

the Defense Environmental Restoration Account (DERA), with program guidance provided by the Office of the Assistant Secretary of Defense (OASD) (E) annually. This summary includes discussions of the following:

- Background
- Site Discovery and Notification
- Federal Agency Hazardous Waste Compliance Docket
- Preliminary Assessment/Site Inspection (PA/SI) and NPL listing
- Coordination with Regulatory Agencies and the Public
- Remedial Investigation/Feasibility Study (RI/FS)
- Health Assessment
- Record of Decision (ROD)
- Interagency Agreement (IAG)/Federal Facility Agreement
- Remedial Design/Remedial Action
- Administrative Record/Retention of Records
- Operation and Maintenance and Long-Term Monitoring
- Citizen Suits

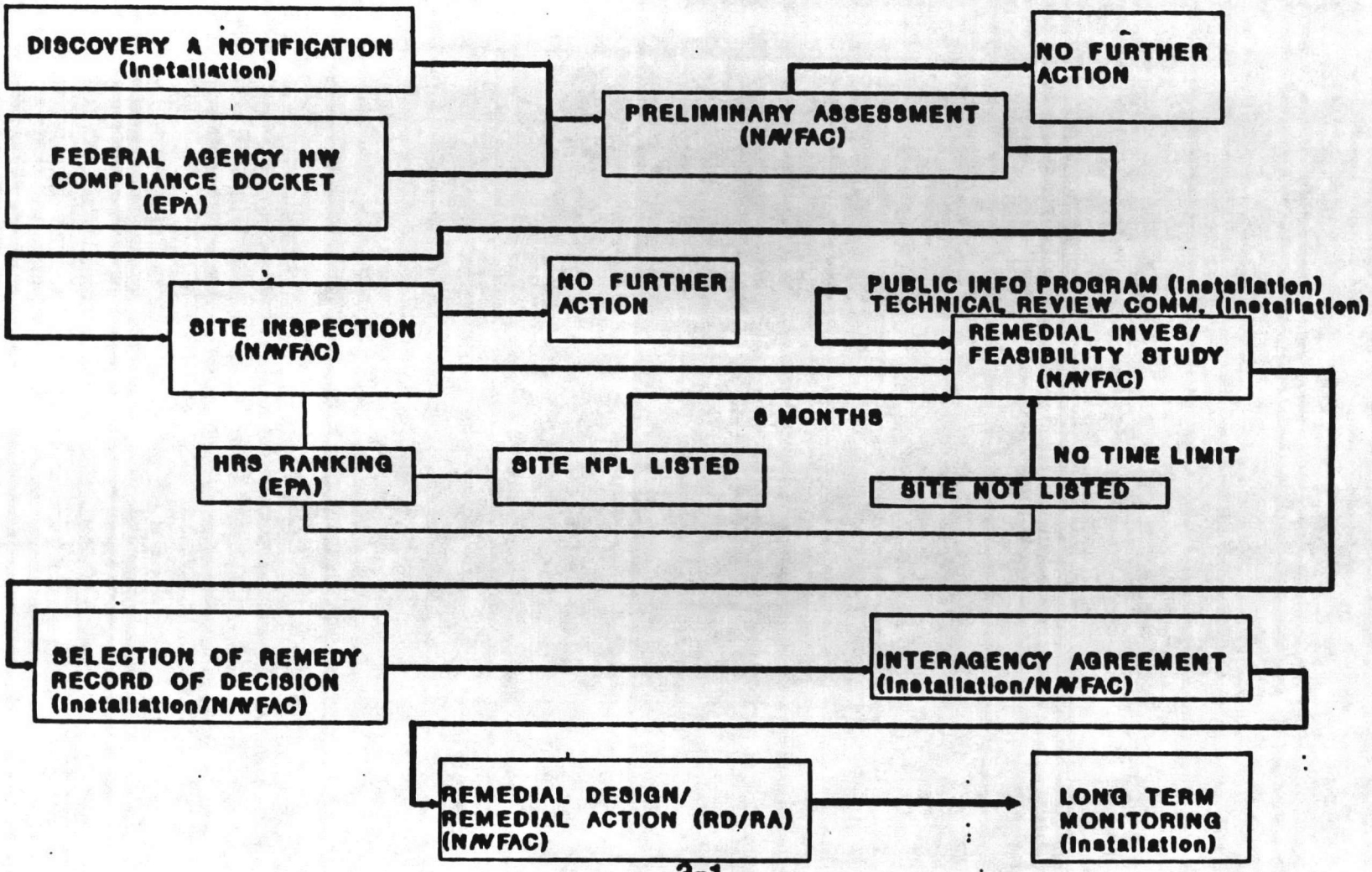
It is very important that the terms "facility", "sites", "installation", and "activity" are understood in this program. CERCLA 101 (9) defines "facility" and discusses individual "sites" as any building, structure, installation, equipment, pipe or pipeline, well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, or aircraft; or any site where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise come to be located. Therefore, these two terms are carefully used in this summary. In addition, the term "installation" is used to describe the Marine Corps land that is subject to the legal requirements of CERCLA, the NCP, and to the policy contained herein. The term "activity" or Marine Corps activity" is synonymous with the term "installation" in this summary.

Figure 3-1 illustrates the basic remedial action process and outlines responsibilities for the various steps. A key to the Superfund/SARA/IR acronyms is provided in appendix (1).

a. Background. The Marine Corps, like private industry, conducts a number of industrial processing and manufacturing operations which utilize industrial chemicals. Although in the past, wastes from our operations were disposed of by the commonly accepted practices of the times, we, as a nation, have found that such practice may have resulted in significant risks to public health and the environment. With the passage of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), the Department of the Navy embarked on a program to identify, investigate, and clean up past hazardous waste disposal sites. This program called the Navy Assessment and Control of Installation Pollutants (NACIP) program was implemented at Marine Corps activities.

The NACIP program, while closely paralleling the EPA Superfund program, was not procedurally the same. CNO and CMC determined

REMEDIAL ACTION



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that approximately 100 installations should have an Initial Assessment Study (IAS) to determine through record searches, interviews, aerial maps, etc., if potential hazardous waste (HW) disposal sites existed on the installation. Over 100 IASs were done by the Naval Energy and Environmental Support Activity (NEESA) between 1980 and 1986 and over 1200 sites were identified. IASs were comparable to a Preliminary Assessment/Site Inspection (PA/SI) under EPA's program. During the IAS, all sites were run through a rating model and approximately 700 sites were recommended for further investigation through a Confirmation Study (CS). The CS was to verify and characterize contamination at the sites and was comparable to EPA's Remedial Investigation/Feasibility Study (RI/FS). The Department of the Navy had over 80 CSs underway on October 17, 1986, when the Superfund Amendments and Reauthorization Act (SARA) was passed by Congress. SARA required that Federal Agencies comply with all procedural and substantive requirements of CERCLA. Therefore, the Department of the Navy adopted the EPA/Superfund terminology and procedures in lieu of those of NACIP. This effort is referred to as the Installation Restoration Program (IRP). NAVFACENGCOM is modifying existing CS contracts to include the EPA requirements. The remainder of this guidance discusses implementation of the IR program.

b. Site Discovery and Notification. An installation commander must immediately notify the National Response Center (NRC) as soon as there is knowledge of any release (other than a federally permitted release) of a hazardous substance, in excess of a reportable quantity, from the facility (CERCLA 103). Although notification duties may be delegated, the installation commander is still ultimately responsible to ensure proper and prompt notification. A "release" is specifically defined in CERCLA 101(22). The hazardous substances and their reportable quantities are listed at 40 CFR 302. CERCLA makes no distinction between current or past releases under the reporting requirement. The requirement goes into effect upon discovery; i.e. as soon as the person in charge has knowledge of the release. This means that the installation must give prompt notice of such information to the National Response Center, similar to the telephone calls and/or short messages which installations now give to the NRC concerning spills. MCO P11000.8B provides information and format for reporting. It is imperative that a follow-up confirming letter be sent to the appropriate agency in addition to the verbal telephone notice. An owner or operator who fails to immediately notify the appropriate agency as soon as there is knowledge of such release or submits any information which is known to be false or misleading, can be prosecuted and fined or imprisoned upon conviction (CERCLA 103(b)).

Under the Installation Restoration Program, notification of potential release is accomplished when the installation commander forwards a Preliminary Assessment/Site Inspection (PA/SI) report (see paragraph (3d)) to EPA and State regulatory agencies. Usually,

until a PA/SI is accomplished, the installation commander has no knowledge of a release. If, however, the installation discovers a release, and that release has not previously been reported in an IAS or PA/SI, then the installation commander must report it immediately to the appropriate agency. The NAVFACENGCOM EFD should then be requested to investigate the problem. If an installation, in reviewing its records, discovers information that a potential disposal site exists that was not previously investigated, then the installation should report this information to the Engineering Field Division for further review. It need not be reported to the NRC at this time since it is only a potential site.

c. Federal Agency Hazardous Waste Compliance Docket. Congress wanted to ensure that federal agencies accomplished preliminary assessments (PAs) at certain installations. They required EPA to establish a Federal Agency Hazardous Waste Compliance Docket. The docket lists those federal facilities that submitted under the following notification, reporting, and permitting sections of RCRA and CERCLA:

(1) Resource Conservation and Recovery Act (RCRA) Section 3016, Biennial Inventory of Federal Hazardous Waste Facilities.

(2) RCRA Section 3005, Permits for Treatment, Storage, and Disposal of Hazardous Wastes.

(3) RCRA Section 3010, Notification of Hazardous Waste Generation, Transport, Treatment, Storage, or Disposal Activities.

(4) CERCLA Section 103, Notice of Hazardous Substance Release.

The docket also lists any installation which has reported a release of a hazardous substance, applied for a RCRA Part A or Part B permit, or submitted NACIP or IR information to EPA.

EPA published the initial docket in the Federal Register on 12 February 1988. A preliminary assessment must be accomplished (See paragraph)(3d)) for each facility on the docket (Section 120(d)). These are being conducted by NAVFACENGCOM for Navy/Marine Corps installations. The installation commander is required to forward them to EPA.

EPA must make the docket information available for public inspection at reasonable times, and establish a program to provide this information to the public (CERCLA 120(c)(3)). EPA has established repositories of docket information at their regional offices. In conjunction with the installations, NAVFACENGCOM should review and upgrade the repository information

and ensure that all sites are being addressed. EPA will not remove sites from the docket but it will indicate "No further action required" or other status, as appropriate.

d. Preliminary Assessment/Site Inspection (PA/SI) and NPL Listing. After site discovery and notification by an installation or after an installation has been listed in the Federal Agency HW Compliance Docket, NAVFACENGCOM will ensure that a Preliminary Assessment is conducted, and where appropriate, a follow-on site inspection is done. A PA is developed from readily available existing information and includes (1) identification of the source and nature of the release, (2) evaluation of the magnitude of the potential threat, and (3) evaluation of factors necessary to determine if immediate removal is necessary. The PA determines if additional investigation of the site is required. The PA is forwarded to EPA and state regulatory agencies by the installation commander. If additional investigation is required, actual samples are collected and analyzed in a Site Inspection (SI) by NAVFACENGCOM. At the conclusion of the SI, the total PA/SI package is sent to EPA and state regulatory agencies by the installation commander.

Information from the PA/SI is used for scoring hazardous waste sites. Using a Hazard Ranking System (HRS), EPA must score hazardous waste sites based upon their potential to affect human health, welfare, and the environment. The HRS is a means of applying uniform technical judgement regarding the potential hazards presented by a facility relative to other facilities. It does not address the feasibility, desirability, or degree of cleanup required. Hazardous waste sites receiving the highest scores (i.e, having the highest potential for affecting human health, welfare, and the environment) are put on the National Priorities List (NPL) (40 CFR 300, appendix B). A site is proposed for the NPL if the site score is 28.5 or higher. Sites on the NPL will receive the highest priority within the IR program.

e. Coordination with Regulatory Agencies and the Public. At this point in the IR program, initial investigation of a number of sites has been accomplished. Unlike other Department of the Navy programs, CERCLA and EPA guidance require that regulatory agencies and the public be informed of these results and other studies/investigations as they occur. Therefore, the following actions are required:

(1) Comment by EPA, State and Local Authorities. The installation commander must ensure that EPA and appropriate state and local officials have adequate opportunity to review and comment on assessments/studies and proposals for response/remedial actions (SARA 211). Although assessments, studies, and recommendations for remedial actions are normally conducted for the installation by NAVFACENGCOM, the installation commander remains the person ultimately responsible for ensuring compliance with this section by forwarding documents to regulatory agencies.

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(2) Technical Review Committee (TRC). The installation commander must establish a Technical Review Committee to review and comment on IR actions and proposed actions, whenever possible and practical. The function of the TRC is to maintain a dialogue with technically knowledgeable individuals to help ensure that all environmental concerns with the studies and ultimate cleanup recommendations have been addressed during the remedial process. Invitations for participation must be sent to the EFD, the EPA, and appropriate state and local authorities, including a public representative of the community involved (SARA 211). Generally, this will require that a technical review committee be formed at each installation with IR sites. Committee membership will facilitate other aspects of the IR process, such as regulatory involvement and public participation. NAVFACENGCOM EFDs should be consulted for assistance with the TRC.

(3) Public Information Program. It is essential that an active public information program be implemented at the installation level for all IR sites and that a formal written Community Relations Plan be prepared by each installation that has a site listed on the National Priorities List. The installation shall initiate and continue the public information program throughout the life of the IR program at the installation. Area coordinators and EFDs should be kept informed of all public affairs actions taken by the installation.

f. Remedial Investigation/Feasibility Study (RI/FS). Sites identified in the PA/SI as potential threats to human health or the environment, receive a comprehensive investigation called an RI/FS. All contaminants and their migration pathways are defined, potential risks to public health and the environment are assessed, and a comprehensive, quantitative risk assessment is carried out. The RI serves as the mechanism for collecting data for site and waste characterization to evaluate the performance and cost of the treatment technologies and support the design of selected remedies. The FS serves as the mechanism for the development, screening, and detailed evaluation of potential alternatives. The purpose is to evaluate the threat to public health before remedial actions, to develop cleanup performance goals, and to compare the health risks of the cleanup alternatives. Although many criteria are to be used in selecting remedial actions, protection of public health and the environment is paramount (CERCLA 121(d)). Activities should assist NAVFACENGCOM and the RI/FS contractor to obtain complete and accurate information so that the risk assessment results are representative. The Remedial Action alternatives are evaluated in terms of effectiveness and cost. It is Department of the Navy policy to conduct an RI/FS at both NPL sites and non-NPL sites in accordance with EPA guidelines. The RI/FS will be conducted by NAVFACENGCOM. SARA requires an RI/FS be commenced within six months of a site being listed on the NPL. The RI/FS is considered to be commenced when a notice is provided to the appropriate regional EPA office that a contract to conduct the RI/FS has been awarded. RI/FS's at non-NPL sites will be expedited also.

g. Health Assessment. The Agency for Toxic Substances and Disease Registry (ATSDR) must perform a health assessment for each facility proposed for the NPL (CERCLA 104 (i) (6)). We expect ATSDR to do this using available information from our IR studies and from site visits. ATSDR must complete a health assessment before the completion of the RI/FS to the maximum extent possible. Marine Corps personnel should cooperate with ATSDR by providing requested information. The results of ATSDR's analysis should be used in the RI/FS as appropriate.

h. Record of Decision (ROD). The installation commander must prepare a ROD to document the decision-making process whenever a remedial action or no action alternative is selected at both NPL and non-NPL sites. Normally, the NAVFACENGCOM EFD will prepare a ROD at the conclusion of an RI/FS. The EFD Commander will forward the recommended ROD to the installation commander. The installation commander must carefully review the proposed ROD and the administrative record (paragraph 3k). If the commander concurs, then he/she should sign it. If he disagrees or has questions on the ROD, the installation commander should discuss and resolve the question with the EFD. A reasonable opportunity for public review and comment must be provided before adoption of any plan for remedial action. The ROD should have a public review and any significant comments, criticisms, and new data submitted by the public should be responded to and be made available to the public before commencement of any remedial action. For NPL sites, the ROD is forwarded to EPA for concurrence. If agreement is not reached on selection of a remedial action for NPL sites with EPA, then selection is by EPA (CERCLA 120(e)). The Department of the Navy has final decision authority for non-NPL sites, as long as all "applicable, relevant, and appropriate" federal and state standards are taken into account. However, if State Superfund laws exist, they must be complied with per CERCLA 120(a) (4).

i. Interagency Agreement (IAG)/Federal Facility Agreement.

(1) No Marine Corps installation has yet entered into an IAG. Until this Headquarters establishes an experience base and is able to provide definitive instruction (including boiler plate clauses for relationships with EPA and state authorities) commanders should exercise caution in making commitments for specific cleanup actions and should seek guidance in each case.

(2) Within 180 days after EPA review of each RI/FS for an NPL site, federal agencies must enter into an IAG with EPA for the expeditious completion of all necessary remedial action (CERCLA 120(e) (2)). Each IAG must include:

(a) A review of alternative remedial actions and selection of a remedial action by the federal agency and EPA.

(b) A schedule for completion of each remedial action.

(c) Arrangements for long-term operation and maintenance of the facility.

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The IAG will be signed by the installation commander. Although the IAG is not required until six months after the completion of an RI/FS, it is desirable to have an agreement early in the RI/FS stage. Such agreements should be reviewed by the cognizant EFD for both technical and legal aspects. No such agreement should be signed by an installation commander unless it has been reviewed by the Office of General Counsel, Assistant General Counsel (Environmental Law). Such review shall be accomplished via the normal chain of command.

j. Remedial Design/Remedial Action. After the Record of Decision has been completed, Remedial Design and Remedial Action should be commenced. For NPL sites, "substantial continuous physical onsite remedial action" must commence not later than 15 months after completion of the RI/FS (CERCLA 120 (e)). This means actual full-scale drilling, excavation, or construction, not merely contract award or groundbreaking. Remedial actions should be completed as expeditiously as possible, whether at NPL or non-NPL sites.

k. Administrative Record /Retention of Records. An administrative record must be established for all IR sites. This forms the basis for the installation commander's selection of a response action. The administrative record must be made available to the public at or near the facility at issue (CERCLA 113(K)). In any judicial action under CERCLA, a court will look to the administrative record to determine whether the agency's decision in selecting a response action was properly made. Unless the objecting party can demonstrate that the decision was not based on an adequate record, was "arbitrary and capricious," or otherwise not in accordance with law (CERCLA 113 (j)), the decision will be upheld. NAVFAC EFDs will establish and maintain the administrative record and send copies/updates to the installation, state, and EPA. Installation commanders must ensure that they send any new or additional information, such as correspondence with regulatory agencies and the public, to the EFD for possible addition to the administrative record. Installations must ensure that the administrative record is available to the public. An up to date duplicate of each item in the official EFD file must therefore be maintained at the installation.

CERCLA 103(d) requires that any person who must notify of known, suspected, or likely releases under Section 103(c) of CERCLA must also retain records of the facility and the hazardous substance release for 50 years after the Act was enacted (1980 + 50 = 2030) or for 50 years after the record was established, whichever is later. The records include information on the location, title, and condition of the facility and the identity, characteristics, quantity, origin, or condition (including containerization and previous treatment) of any hazardous substances contained or deposited on the facility. It is unlawful to destroy, mutilate, conceal, or falsify such records. EPA is authorized to promulgate rules and regulations with respect to the records which should be retained, but has not done

so to date. Pending any such guidance, each installation should retain the appropriate records for at least the statutory time period or apply to EPA for appropriate waivers. Costs for maintaining these records will come from installation operating funds.

l. Operation and Maintenance and Long-Term Monitoring. Defense Environmental Restoration Account (DERA) funds are available for remedial actions, including planning, design, construction, operation, and maintenance. DERA will pay for project capital costs and the first two years of O&M expenses for long-term monitoring systems. Activities must budget and pay for necessary monitoring after two years. This would give sufficient time for the installation to program for the O&MMC costs. The two year period begins with the next available programming cycle after a decision to perform no further remedial action.

m. Citizen Suits. CERCLA allows any citizen to sue any person or government agency "...who is alleged to be in violation of any standard, regulation, condition, requirement, or order which becomes effective pursuant to this Act (including any provision of an agreement under section 120, relating to federal facilities)" (CERCLA 310). This allows private citizens to ensure that the Department of the Navy as an organization and/or its military and civilian employees as individuals are in compliance with CERCLA and with the terms of interagency agreements. In order to sue a federal agency under these provisions, a citizen must give a notice of violation to the President, the State in which the violation occurs, and the Agency. If diligent actions are taken within 60 days after receiving a notice of violation to comply with a CERCLA requirement, then the lawsuit can be prevented. To avoid lawsuits and potential court orders, Marine Corps installations (with NAVFACENGCOM support) must comply with CERCLA and the terms of interagency agreements. Installation commanders and their staffs should be alert to any correspondence from citizens and citizen groups which purports to be a notice of violation and would commence the 60 day time limitation. The installation and EFD legal counsel should be consulted immediately if a citizen suit letter is received by the installation.

09/15/88

KEY TO SUPERFUND/SARA/IR ACRONYMS

ATSDR	Agency for Toxic Substances and Disease Registry
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act, as amended
CFR	Code of Federal Regulations
DERA	Defense Environmental Restoration Account
DERP	Department of Defense Environmental Restoration Program
EPA	U.S. Environmental Protection Agency
FR	Federal Register
IAG	Interagency Agreement
IR	Installation Restoration
NACIP	Navy Assessment and Control of Installation Pollutants
NCP	National Contingency Plan
NPL	National Priorities List
NRC	National Response Center
PA/SI	Preliminary Assessment/Site Inspection
RCRA	Resource Conservation and Recovery Act
RD/RA	Remedial Design/Remedial Action
RI/FS	Remedial Investigation/Feasibility Study
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act of 1986

Appendix (1)

02/28/89

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

FEB 28 1989

OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

MEMORANDUM

SUBJECT: Notice of Environmental Restoration Activities at Department of Defense Facilities

FROM: Christopher Grundler, Director
Federal Facilities Hazardous Waste Compliance Office

TO: Superfund Enforcement Branch Chiefs
Regions I-X

Regional Counsel Hazardous Waste Branch Chiefs
Regions I-X

The purpose of this memo is to draw your attention to the notice provision of Section 211 of the Superfund Amendments and Reauthorization Act of 1986. Section 211 describes the Secretary of Defense's responsibilities under the Department of Defense's (DoD) Environmental Restoration Program. In particular, Section 2705 outlines the Secretary of Defense's responsibility to provide notice and opportunity to comment to EPA and the states on proposals for response activities at Federal facilities to address releases or threatened releases of hazardous substances at a Federal facility.

BACKGROUND

During the EPA workshop on CERCLA Section 120 Federal Facility Agreements held in September 1988, there was a great deal of discussion on the use of removal authorities at Federal facilities. Specifically, many Regions wanted to know how these activities should be incorporated into the overall remediation plan for a Federal facility since Executive Order 12580 delegates the authority to conduct on-site non-emergency removal actions to the Federal agencies. [The responsibility to conduct on-site emergency removal actions has only been delegated to the Department of Defense and the Department of Energy (DOE)].

The Regions expressed concern about cases where Federal agencies were not notifying EPA of removal actions before or at the time they were taken. Since removal activities can have a significant impact on the overall facility clean-up plan, the Regions wanted to know how EPA could compel Federal agencies to coordinate the removal actions with EPA prior to implementation to assure consistency with the final remedial action.

STATUTORY REQUIREMENT FOR NOTIFICATION AND CONSULTATION

Subsection 2705(a) of Section 211 of SARA requires the Secretary of Defense to notify EPA and appropriate State and local authorities of each of the following situations:

(1) The discovery of releases or threatened releases of hazardous substances at the facility.
(2) The extent of the threat to public health and the environment which may be associated with any such release or threatened release.
(3) Proposals made by the Secretary to carry out response actions with respect to any such release or threatened release.
(4) The initiation of any response action with respect to such release or threatened release and the commencement of each distinct phase of such activities.

In addition, subsection 2705(b)(1) requires that the Secretary of Defense ensure that EPA and State and local authorities have an adequate opportunity to comment on release notices under (1) and (2) listed above. Pursuant to subsection 2705(b)(2), EPA and the states must have adequate opportunity for timely review and comment on proposals for all response actions referred to in (3) and (4) above and before undertaking any activity or action referred to in (4). The opportunity for review and comment is required unless the action is an emergency removal taken because of imminent and substantial endangerment to human health or the environment and consultation would be impractical. We construe this to mean time-critical emergency response actions.

It is important to note that Section 2705 applies to non-NPL as well as NPL sites. It also applies to all response actions, though only removal actions are highlighted in this memorandum. Regions and states may use this authority to review and comment on response actions being taken at non or pre-NPL (i.e., in the NPL scoring pipeline) facilities that EPA or the states consider significant.

INCORPORATION INTO FFAs

In conclusion, Section 2705 makes it clear that EPA has a statutory basis for requiring review of proposed removal actions prior to implementation of these actions at DoD facilities. Although EPA Headquarters has no plans to negotiate model language for removal actions with DoD, Regions should include removal

provisions in Federal Facility Agreements. The actual language for the removal provision can be worked out in the context of site-specific negotiations.

To clarify the EPA and state oversight role for removal actions at Federal facilities, some Regions are including a special provision on removal actions in site-specific Federal Facility Agreements. (See Attachments 1 and 2).

REMOVAL ACTIONS AT NON-DOD FACILITIES

As Section 2705 of SARA was written specifically for DOD, EPA and the states have a narrower legal basis for seeking a role in the review process for non-emergency removals at non-DOD facilities. CERCLA Section 120(c) requires that information submitted under Section 3016 of RCRA be supplemented by "notice of each subsequent action taken under this Act with respect to the facility." Although this authority requires Federal agencies to give notice of activities, it does not give EPA the authority to intervene to prevent an inappropriate response.

The best argument for EPA and the states to use for carving out a role for the regulators in the review process of non-emergency removals at non-DOD facilities is that of consistency. It can be argued that all proposed actions at a NPL facility must be reviewed by EPA and the state to ensure consistency with the final remedial action.

CONTACTS

If you have any questions or comments, please feel free to call me at FTS-475-9801 or contact your regional coordinator in the Federal Facilities Hazardous Waste Compliance Office.

Attachments

cc: CERCLA Federal Facility Contacts
Ivy Main, OGC
Lee Herwig, OFA

Date

ROUTING AND TRANSMITTAL SLIP 14 Nov 91

TO: (Name, office symbol, room number, building, Agency/Post)	Initials	Dat
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2. AMSMC-CS KENNARD G. KARR Colonel, GS Chief of Staff		18 NOV
3. ~~AMSMC-DCGPR~~ 18 NOV 1991		
4. ~~AMSMC-CG~~		
5.		

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REMARKS

SUBJECT: U.S. EPA Guidance

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GREGORY S. MILLER Major, GS Secretary of the General Staff	Phone No. DSN 793-5621

5041-102

GPO : 1987 O - 170-636

OPTIONAL FORM 41 (Rev. 7-76)
Prescribed by GSA
FPMR (41 CFR) 101-11.206

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DOC. NO. : ELEV-000672 12-07-07

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Commander,
U. S. Army Tank Automotive Command
Warren, MI 48397-5000

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U. S. Army Health Services Command
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Commander,
U. S. Army Medical Research and Development Command
Fort Detrick, MD 21701

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Doc. No.: CLEV-005 17-12.04-10/18/89

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
200 STOVALL STREET
ALEXANDRIA, VA 22332-2300

IN REPLY REFER TO

5090
181A
18 OCT 1989

From: Commander, Naval Facilities Engineering Command

Subj: MANAGEMENT GUIDANCE FOR EXECUTION OF THE FY 1990/91 DEFENSE ENVIRONMENTAL RESTORATION PROGRAM (DERP)

Ref: (a) ODASD(E) ltr of 12 Jul 89; same subject

Encl: (1) ODASD(E) ltr of 29 Sep 89; same subject

1. Enclosure (1) is forwarded for your review. This management guidance outlines the types of projects eligible and ineligible for Defense Environmental Restoration Account funding during FY 1990/91. When reviewing the enclosed management guidance, please keep in mind that even though Building Demolition/Debris Removal is listed as an eligible project, as in FY 1988/89, ODASD(E) does not expect to allocate funds for this program during FY 1990/91 due to other higher priority cleanup activities. We recommend you attempt to get other funds to demolish buildings.

2. Reference (a) requested comments concerning the proposed Management Guidance for Execution of the FY 1990/91 DERP. Based on Navy comments, ODASD(E) revised the draft guidance in the following areas:

- Deleted discussion of advantages/disadvantages of centralized/decentralized approaches for implementing the Defense Priority Model and Defense Priority System. ODASD(E) modified and updated this section of the guidance.

- Modified the language for Base Closure/Realignment Requirements and Property Transfer Procedures to permit cleanup of an Installation Restoration (IR) site regulated as a solid waste management unit.

- Changed the guidance concerning Activities Eligible for DERP - IR Program - to allow for an additional 8 years of operation and maintenance costs for operation of remedial and monitoring systems.

- Deleted costs of operation and maintenance of remedial and monitoring systems from Activities Not Eligible for DERP.

REPRODUCED AT GOVERNMENT EXPENSE

12.04- 10/18/89

Subj: MANAGEMENT GUIDANCE FOR EXECUTION OF THE FY 1990/91 DEFENSE ENVIRONMENTAL RESTORATION PROGRAM (DERP)

3. We are looking at enclosure (1) in further detail and will provide additional guidance at a later date. Our point of contact is Bill Judkins, Code 181A, commercial (202) 325-8176 or A/V 221-8176.

J. A. Rispoli

J. A. RISPOLI
Assistant Commander for
Environment, Safety & Health

Distribution:
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REPRODUCED AT GOVERNMENT EXPENSE

Doc. No. : CLEJ-00588-12.04-08/01/c

MARINE CORPS BASE, CAMP LEJEUNE
ENVIRONMENTAL COMPLIANCE EVALUATION
CONDUCTED 21 May - 8 June 1990

01 August 1990

The ECE report consists of an Executive Summary, a narrative portion for each of the areas evaluated and a set of problem notification forms for those issues which merit immediate attention.

Doc No: CLEJ - 00588 - 12.04 - 08/01/90

MCB CAMP LEJEUNE

ENVIRONMENTAL COMPLIANCE EVALUATION

EXECUTIVE SUMMARY

Wastewater Treatment Plant operations are at a barely acceptable level. Lack of routine and preventative maintenance will eventually result in serious violations of NCDEM regulations. Several facilities are currently operating in violation of regulations including the sewage pump stations and the Camp Geiger WWTP outfall and sludge disposal site.

Two large piles of contaminated soil have been stockpiled on base. One of these piles is considered hazardous waste while the other is petroleum contaminated. Plans to dispose of these wastes should be initiated immediately. Stockpiling of wastes, especially hazardous wastes, should be prohibited on the Base.

A back-up system for removal of grit from oil water separators is required to prevent unpermitted overflows and excessive accumulation of grit. The vacuum truck assigned for this purpose had been out of service for several weeks at the time of the evaluation.

Unpermitted wastewater discharges from various points around the activity should either be eliminated or permitted. These discharges could be considered serious violations by the NCDEM.

Air permits should be updated to reflect current operations. Some equipment has been eliminated while other new equipment has been installed without notifying the State.

In order to comply with Senate Bill 111, MCB Camp Lejeune must develop procedures to achieve and document a solid waste volume reduction of 25 percent.

Several POL and hazardous waste storage areas lack containment berms. The Base SPCC plan needs to be updated to comply with federal laws and provide a basis for containment and control projects.

The Base is out of compliance with UST leak detection, closure, notification, site characterization (for releases) and inventory control requirements. It is possible that the State will issue Notices of Violation for one or all of these deficiencies.

Doc No: 0CE3 - 00508-
12.04 - 08/01/90

The Base has been ranked on the National Priority List of hazardous waste disposal sites by EPA. As such, the activity has entered into a Federal Facilities Agreement with EPA Region IV and the State of North Carolina. Full support of the Installations Restoration efforts will require engineering, clerical, legal, and JPAO resources to comply with the technical, administrative and community relations aspects of the program.

194-dlm:NC ECE

DOC NO. CLEJ - 00300 -
12.04 - 08/01/90

MCB Camp Lejeune Environmental Compliance Evaluation

Air Quality

1. The cooling coil system that was to be installed on a 330 gallons capacity vapor degreaser tank in Building 1601 is not present.

   Applicable regulations include:

   North Carolina Air Permit No. 5790R2, Line Item No. 2. Permit expiration date: January 1, 1991; specified conditions and limitations Number 6, 9.

   Recommendation: Either update and revise the current air permit indicating that this particular source no longer exists or upon permit renewal application delete this source. (It could not be ascertained if this equipment was ever installed).

2. The filter type paint booth installed on the auto hobby body paint shop in Building No. 1103 is missing. (It has been dismantled and removed; the exhaust stock remains on the roof, but it is disconnected.).

   Applicable regulations include:

   State of North Carolina air permit No. 5790R2, Line Item No. 5. permit expiration date: January 1, 1991; specified conditions and limitations numbers 6 and 9.

   Recommendation: Update and revise the current air permit indicating that this particular source no longer exists. Alternatively, upon permit renewal application, delete this source in its entirety.

3. A bag filter installed on woodworking equipment in the carpentry shop of building No. 915 also has a cyclone installed that is not listed on the applicable air permit.

   Applicable regulations include:

   State of North Carolina Air Permit No. 5790R2, line item No. 7. Permit expiration date: January 1991: specified conditions and limitations Numbers 6 and 9.

   Recommendation: Update and revise the current air permit indicating the addition of the cyclone into the system for this particular source. Alternatively, upon permit renewal application add this pollution abatement equipment to the line item for this source.

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4. A bag filter installed on two (2) lime storage silos at Building No. 670, wastewater treatment plant really consists of a separate bagfilter on each lime storage silo. Each silo has a capacity of 24 tons and is filled approximately every 3 weeks.

Applicable regulations include:

State of North Carolina Air Permit No. 5790R2, line item No. 9. Permit expiration date: specified conditions and limitations Numbers 6 and 9.

Recommendation: Update and revise the current air permit to indicate that two bagfilters (one bagfilter on each storage silo) exist. Alternatively, upon permit renewal application, include the other bagfilter, this correctly identifying the pollution abatement equipment that comprises this emission source.

5. A filter type paint spray booth installed at the ground support vehicle painting operations at Building No. AS-518 has been down for over six months, and in fact, has been dismantled. The booth is presently used for equipment storage.

Applicable regulations include:

State of North Carolina Air Permit No. 5790R2, line item No. 12. Permit expiration date: January 1, 1991; specified conditions and limitations Numbers 6 and 9.

Recommendation: Update and revise the current air permit to indicate that this particular source no longer exists. Alternatively, upon permit renewal application, delete this source from the permit in its entirety.

6. A water wash type paint spray booth installed on ground support vehicle painting operation at building. No. AS-4146 is inoperable due to air flow problems and lack of water use and disposal problems. The facility is currently being used for spot painting with aerosol cans.

Applicable regulations include:

State of North Carolina Air Permit No. 5790R2, line item No. 13. Permit expiration date: January 1, 1991; specified conditions and limitations numbers 6 and 9.

Recommendation: Update and revise the current air permit to delete this source if paint spraying operations are to be suspended at this facility. Repair the facility to the design parameters contained in the original permit application submittal, prior to permit renewal.

7. A filter type paint spray booth and a cleaning booth installed for general painting operations in Building No. AS-4106 no longer exists; it has been dismantled.

   Applicable regulations include:

   State of North Carolina Air Permit No. 5790R2, line item No. 14. Permit expiration date: January 1, 1991; specified conditions and limitations numbers 6 and 9.

   Recommendation: Update and revise the current air permit to delete this source in its entirety. Alternatively, upon permit renewal application, delete this source from the permit in its entirety.

8. A water wash type paint spray booth installed on a furniture repair shop located in Building No. 609 no longer exists; it has been dismantled.

   Applicable regulations include:

   State of North Carolina Air Permit No. 5790R2, line item No. 18. Permit expiration date: January 1, 1991; specified conditions and limitations numbers 6 and 9.

   Recommendation: Update and revise the current air permit to delete this source in its entirety. Alternatively, upon permit renewal application, delete this source from the permit renewal application in its entirety.

9. A water wash type paint spray booth installed at a vehicle maintenance shop is misidentified as being located at Building No. P-027. Additionally, there is no apparent drain for the waste water within the confines of the paint spray booth.

   Applicable regulations include:

   State of North Carolina Air Permit No. 5790R2, line item No. 19. permit expiration date: January 1, 1991; specified conditions and limitations numbers 4, 6, and 9.

   Recommendation: Update and revise the current air permit to indicate the source's true location. (P-027 refers to the project number used for construction of this booth; the actual building location is FC-230). A design deficiency exists with respect to disposal of the waste water generated; there are no sanitary sewer drains located closeby.

10. A water wash type paint spray booth installed at a metal parts coating operation (ground support equipment facility on White Street) does not locate this source adequately. Additionally, the paint spray booth is inoperable due to

freeze problems this past winter. Also, designs deficiencies with respect to stack height.

Applicable regulations include:

State of North Carolina Air Permit No. 5790R2, line item No. 20. Permit expiration date: January 1, 1991; specified conditions and limitations numbers 4, 6, and 9.

Recommendation: Update and revise the current air permit to indicate this source's present location. The paint spray booth is located in Building AS-4135. Repair the water supply to the paint spray booth. Correct the air imbalance, the air flow intake is 2,000 ACFM, however, the exhaust is designed for 200 ACFM. Also, the exhaust stack is not located on the roof's peak. Wind direction can deposit/toxics into air intakes located on the roof for air conditioning/air handling.

Doc No: CLEJ-00588
12.04-08/01/90

General Stormwater Management

1. NC law requires stormwater management in Onslow County effective 1 January 1988. For all new construction which disturbs more than 1 acre of land, MCB needs to hold as part of the administrative record proof that construction projects are in compliance. Specifically, a system needs to be setup to document stormwater management compliance to include documentation of density approvals (required on non-federal lands as deed restrictions) and copies of the stormwater disposal system Operation and Maintenance Plans and records for assessing maintenance (i.e., clean out/operations of ponds).

   Applicable regulations are:

   North Carolina Administrative Code 15 NCAC 2H.1000 Stormwater Runoff Disposal

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Infectious Waste

1. During the evaluation of infectious waste management, the Naval Hospital, outlying medical and dental clinics and aid stations were visited. No significant violations of state or Navy regulations were noted. The disposal, logging, transport and incineration of medical wastes is well managed. Individuals working with or around infectious wastes are aware of the risks and understand disposal procedures. Although there are variations in the disposal and handling of waste between the hospital, clinics and aid stations these tend to be minor in nature.

2. In some locations all disposable items which have been in contact with blood or body fluids are treated as infectious and disposed accordingly. Examination of sharps containers revealed that some syringes are recapped in violation of written policy. Pharmaceuticals in some locations are disposed as infectious waste. Some personnel were not aware of appropriate procedures for accidental sticks from sharps. Although these were minor infractions, a consistent, base wide policy would alleviate most of them. Furthermore, if some wastes will no longer be incinerated it will become more critical that infectious wastes are properly segregated, packaged labeled, tracked, transported and treated prior to disposal.

3. The Naval Hospital has an autoclave not currently in use. All infectious wastes are transported to the incinerator at the hospital for disposal. MCB and the Naval Hospital should develop a policy for managing infectious waste using a combination of incineration and autoclaving/landfilling.

Installation Restoration Program

1. The IR program at Camp Lejeune is staffed by one full-time environmental specialist funded by DERA. Additional support is provided by EMD. Additional DERA salary and support funds are recommended for clerical, legal and JPAO support.

2. The program at Camp Lejeune is well coordinated with the Atlantic Division and no discrepancies were apparent. Of particular note are the community relations and administrative record aspects of the program. Camp Lejeune is clearly a leader in developing and implementing a pro-active program. These two areas are critical to maintaining good working relationships with regulators and the public.

3. It is recommended that MCB Camp Lejeune consider staffing the IR program directly under the Assistant Chief of Staff for Environment due to the nature of the program. Legal, JPAO, PW, Maintenance, State and Federal regulators, and the public are intimately involved in the program as a result of listing on the NPL. It is important that the command be acutely aware of the many IR activities due to the public and regulatory scrutiny required by CERCLA and SARA.

NPDES

1. Large Old Hanger - oil/water separator at Helicopter Washrack. Needs cleaning out. Emergency overflow to storm drain is not permitted.

   Applicable regulations include:

   Section 301.A of Clean Water Act - Prohibition of unpermitted discharges NC Administrative Code 15 NCAC 24.0100.0127 Wastewater Discharges to State Waters - Certificate of coverage.

   Recommendation: Clean grit and oil out of separator. Obtain permit for overflow pipe under a Certificate of Coverage obtained from NC DEM.

   One Certificate of Coverage can cover all similar discharges on the Base.

2. POV Car Wash. Drain line from new POV Car Wash tied into old oil/water separator. Inlet point is into second chamber of separator. Drain line should be moved to divert flow to first separator chamber.

   Industrial Discharge at Steam Plant Fuel Storage Area (Berms) is not permitted.

   Applicable regulations include:

   Section 301.A of Clean Water Act - Prohibition of Unpermitted Discharges North Carolina Administrative Code 15 NCAC 2.H.0100 Wastewater Discharge to State Waters (Specifically 2.H.0100.0127)

   A Certificate of Coverage as described in referenced regulation should be obtained for this outfall.

3. HP1775 - Heavy Equipment Maintenance Complex
   Steam Manhole (STM57) outside of gate appears to be discharging steam condensate to adjacent storm drain.

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Applicable regulations include:

Section 301.A of Clean Water Act - Prohibition of unpermitted discharges.

Recommendation: Repair leak or divert condensate to sanitary sewer.

4. Industrial discharge at Hadnot Point Ash Street Fuel Storage Area (Berms) is not permitted.

Applicable regulations include:

Section 301.A of Clean Water Act - Prohibition of unpermitted discharges. North Carolina Administrative Code 15 NCAC 2H.0100 Wastewater Discharges to Surface Waters. (Specifically 2H.0100.0127)

A Certificate of Coverage as described in referenced regulation should be contained for #1 outfalls and any others like these (i.e., industrial areas with discharge to storm drains).

5. Building HP250 Electrical/Com Shop. Washrack grit pit emergency overflow line to storm ditch - invert of pipe is 6" from bottom of pit. Grit accumulates too quickly, causing overflows to storm ditch as well as grit carryover into oil/water separator.

Applicable regulations include:

Section 301.A of Clean Water Act - Prohibition of unpermitted discharges.

Request LANTDIV funding to replace overflow line in grit pit. Based on design deficiency (LANTDIV designed facility) customer developed design deficiency.

If MCON funding is available then submit PCR to CMC and initiate special project to correct the problem.

6. Creek between "I" street and Holcomb Blvd. Temperatures elevated due to leaking condensate return pipe which runs across Creek. Past discharges of line from HP.20 in conjunction with the elevated temperatures creating ideal environment for algae-growth all along Creek.

Applicable regulations include:

Section 301.A of Clean Water Act - Prohibition of unpermitted discharges.

Recommendation: Repair pipe leak.

DOC NO. CLEJ-00580 —
12.04 - 08/01/96

Activity aware of lime pond overflow problem. Problem has been corrected.

NPDES/HAZWASTE

1. Grit and contaminated soil disposal. Activities stockpiling grit/soil. Contract to dispose of as Solid Waste has expired. Conduct study to determine: (1) inventory sources; (2) characterize soil from various sources (TPH, TOX, etc), (3) determine disposal alternatives as well as beneficial uses (i.e., land farming, fill, road application). Study would recommend if segregation of sources necessary to separate soils suitable to beneficial use from soils which must be landfilled. Recommend submittal of PCR to LANTDIV to conduct such study.

Doc No: CLEJ-00588-
12.04-08/01/90

Potable Water

1. Lead in drinking water Program - May not comply with the deadline required by OPNAVNOTE 5090.2.

   Camp Lejeune did not finish all water coolers sampling test, the deadline required by OPNAVNOTE 5090.2 was:

   a. Initial screening samples of all drinking water coolers shall be completed by 1 September 1990.

   b. Full protocol sampling is required by 1 January 1991, for drinking water coolers where initial screening results exceed 20 ppb.

   Applicable regulations include:

   CNO OPNAV Notice 5090.2 (27 April 1990)

   EPA draft suggested sampling procedures to determine Lead in Drinking Water in Buildings other than single Family Homes (June 1988).

   Recommendation: Take initial screening samples for all drinking water coolers, not only for Hospital, Day Care Center and Schools. If the lead concentration exceeds 20 ppb, full protocol sampling is required.

2. BOQ located in MCB Camp Lejeune has found cross-connection problems in the drinking water system, therefore, this problem may exist in other places.

   Applicable regulations include:

   MCO P11000.B.
   NAVFAC MO-210
   NCAD Title 10. Chapter 10. Subchapter 10D S1006 and S1090.

   Recommendation: For the protection of the base drinking water, we recommend establishing a Base order cross-connection and backflow prevention program, which includes the following items:

   - at least one person should be delegated the responsibility and authority for maintaining the program.
   - initial building survey.
   - installation of required devices
   - scheduled periodic inspections of the building to ensure proper installation of backflow prevention

devices and identification of any new hazardous conditions

- schedule annual periodic testing of the backflow prevention devices

3. MCB Camp Lejeune 6 water treatment plant are in excellent maintenance and operation condition, (you do a very good job), except the following:

Holcomb Boulevard WTP: The painting of 3 spiractors was deteriorated.

Applicable regulations include:

Maintenance and operation of water supply, treatment, and distribution systems - NAVFAC NO-210

MCO P11000.8

Recommendation: Scrape and repaint these 3 spiractors.

4. Air Station (New River) WTP:

Algae growths on the wall of the sand filter tanks.

Plumbing system in hydrated lime feeding room was deteriorated.

Applicable regulations include:

NAVFAC MO-210
MCO P11000.8

Recommendation: Clean the wall of the sand filter tanks. Scrape and repaint the plumbing system

5. Hadnot Point WTP:
Elevated Tank #S5 - gate valve was leaking

Applicable regulations include:

MCO P11000.8
NAVFACNO-210

Recommendation: Repair the gate valve.

6. Onslow Beach:
Brine (or salt dissolving) tank rusted.

Applicable regulations include:

MCO P11000.8
NAVFAC MO-210

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Recommendation: Change salt dissolving tank to be a plastic tank and shall be covered in order to prevent damage to equipment.

7. No monthly potable Water Treatment Operating report. Potable water supply and distribution operating report and water quality compliance report (except bacteriological report sending to EFD.

OPNAVINST 5090.1 (Environmental and Natural Resources Program Manual)

Sending water treatment plant monthly or annual compliance reports to EFD as well as sending the reports to North Carolina Department of Human Resources.

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Recycling

1. MCB Camp Lejeune has not yet implemented a base wide SOD for recycling. Current efforts include limited recycling of high grade paper and metals. A survey and pilot recycling program are also underway. A facility for storing and processing recyclables is being acquired. Recommend that a comprehensive economic analysis and market determination covering residential, industrial and office wastes be undertaken to optimize recycling and aid in achievement of state mandated solid waste volume reduction. As a minimum waste reduction, source separation, on-base reutilization, and off-station recycling should be evaluated. The evaluation could be integrated with an evaluation of the landfill volume reduction alternatives.

2. DRMO, PW, Maintenance, and EMD personnel must coordinate efforts to achieve optimum recycling and assure compliance with environmental mandates.

Solid Waste

1. The landfill at Camp Lejeune appears to be operating properly under the requirements of the state of North Carolina. The landfill is well maintained and operated with particular attention to segregation of wastes and prevention of disposal of hazardous and recyclable wastes. Base maintenance should be commended for their well run landfill.

2. In 1994 Camp Lejeune will be required to open a new landfill with liners and leachate collection. A study has been requested to site a new landfill and close the existing fill.

3. By January 1, 1991, contingent on the passage of State Senate Bill 111, Camp Lejeune will be required to reduce the volume of waste entering the landfill by 25 percent. The base must undertake efforts to establish a baseline volume of waste generated correlating weights of various materials to volume. There are no scales currently located at the landfill although there are scales on the base.

4. Volume reduction goals must be closely coordinated with recycling and other waste management programs (infectious waste, hazardous waste composting, WWTP sludge, ash disposal, etc.) to insure economical and environmentally sound management.

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SPCC

1. TACAN Boom Area. Replace deteriorated Boom. Estimated cost $15,000 installed.

2. Ordinance Area Boom. Replace deteriorated Boom. Estimated cost $15,000 installed.

3. BB9 Steam Plant - Fuel Oil Storage Containment (New Construction). Appears to be insufficient containment for two storage tank.

   Applicable regulations include: 40 CFR Part 112 Oil Pollution Prevention.

   Determine if sufficient containment (volume equal to 100% of volume of both tanks) is provided.

4. Some maintenance shops do not have containment under/around POL storage areas.

   Applicable regulations include: 40 CFR 112.7(c). Finalize SPCC Plan.

   Install proper containment according to SPCC Plan. This will probably be a concrete pad w/concrete berms and controlled drainage. (Also roofs)

5. THE SPCC PLAN AT CAMP LEJEUNE HAS NOT BEEN UPDATED IN THREEYEARS. 40 CFR 112.5(b) requires that installations update their SPCC Plans every three years. Also, this update must be certified by a professional engineer. The last update of the Camp Lejeune SPCC Plan was completed in 1986. This is the major problem with SPCC at Camp Lejeune.

   We recommend that Camp Lejeune and LANTDIV work together to have the SPCC Plan updated. LANTDIV has in place a contract to accomplish the required updates and certifications. Use of this contract to update the SPCC will bring Camp Lejeune into compliance with 40 CFR 112.5(b).

6. LACK OF CONTAINMENT FOR PETROLEUM, OIL, AND LUBRICANTS (POL) AT SOME MAINTENANCE SHOPS. Some of the vehicle maintenance shops at Camp Lejeune are lacking the required containment around their storage areas for POLs. Containment is required by 40 CFR 112.7(c).

   We recommend a two phase approach to achieving compliance with 40 CFR 112.7(c). The first phase is to finalize the Camp Lejeune SPCC Plan. This plan will specify the appropriate type of containment to be used for maintenance shop POL Storage areas. After finalizing the SPCC Plan,

construct the appropriate containment structures called for in the SPCC Plan.

7. Camp Lejeune presently has only one vacuum truck. This truck is used to maintain the oil/water separators and catchment basins that are a major part of the spill preventions programs at Camp Lejeune. However, if this one truck is not operating, the separators and basins cannot be maintained and therefore do not operate properly. This can lead to spills of POLs reaching surface water bodies. Also, regular maintenance is required by 40 CFR 112.7(e)(1)(v) on equipment used to implement SPCC. With the one vacuum truck not operating, the regular maintenance cannot be completed and Camp Lejeune is out of compliance.

   We recommend that Camp Lejeune pursue purchasing a backup vacuum truck. The presence of a backup truck will allow maintenance to continue uninterrupted, even if one truck is inoperable.

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Underground Storage Tanks

1. LEAK DETECTION. 40 CFR 280.40(c) requires owners/operators to provide some method of leak detection for USTs installed before 1965 or if the date of installation is unknown by 22 December 1989. To date, Camp Lejeune has not accomplished the required leak detection. However, a contract should be awarded by Camp Lejeune some time in July to accomplish the required precision testing (an acceptable form of leak detection). The award of this contract should be completed as soon as possible so that compliance in this area can be achieved quickly.

For USTs installed between 1965 and 1969, a method of leak detection will be required by 22 December 1990. Also, all pressurized piping associated with USTs will have to have leak detection by 22 December 1990. The process to award a contract to accomplish this work should be started immediately. LANTDIV should have in place two separate contracts to accomplish leak detection (precision testing, an acceptable form of leak detection) by 23 September 1990. Camp Lejeune may want to consider using these contracts to achieve compliance. However, Camp Lejeune will have to provide funding for this work.

2. PROPER CLOSURE OF ABANDONED USTS. 40 CFR 280.70(c) requires USTs that have been temporarily closed (out of service) for more than 12 months to be permanently closed by the end of the 12 month period. Camp Lejeune has numerous tanks that have been out of service for longer than twelve months that have not been permanently closed. However, Camp Lejeune has in design one contract to remove approximately 20 USTs. Also, Camp Lejeune has submitted four different 1391s to permanently close approximately 140 USTs. Along with the 1391s, Camp Lejeune has asked for $2M in funding to remove/close USTs. This demonstrates a desire to properly close abandoned USTs and to also properly close USTs which are not necessary for Camp Lejeune to accomplish its military mission. Compliance with 40 CFR 280 (UST Regulations) is expensive, and getting out of the business of USTs where it is not necessary to have a UST is a very positive step in the right direction.

3. NOTIFICATION OF USTS. 40 CFR 280.22(a) requires owners/operators of USTs to notify the appropriate state agency (in this case DEM) of all USTs in the ground. Final notification forms have not been sent to the DEM. However, draft notification forms have been sent to DEM, in the form of the Draft Geraghty and Miller UST Inventory Study for Camp Lejeune, which included draft completed notification forms. The finalized version of the Geraghty and Miller Study will include final notification forms.

This study should be finalized (LANTDIV and Camp Lejeune should work together on this) and then forwarded to DEM. This will achieve compliance with the notification requirements in 40 CFR 280.22(a).

4. COMPLETION OF INITIAL SITE CHARACTERIZATION STUDY FOR CONFIRMED RELEASES FROM USTS. 40 CFR 280.63(b) requires Camp Lejeune to submit an Initial Site Characterization Study for confirmed release from USTs. This is a study completed to identify how far the contamination has traveled and to identify any immediate threats to human health and the environment, such as explosion hazards. In the past, Camp Lejeune has taken a lot longer than 45 days to submit any reports whatsoever concerning releases from USTs. This is being mentioned in the ECE because state regulators have complained about the pace at which investigations/studies of releases from USTs have proceeded at Camp Lejeune in the past. The regulators now have a specific deadline which they will be able to enforce, if they so choose. Failure to submit reports on time could lead to Notices of Violation, and in some cases, Compliance Agreements.

Camp Lejeune has taken some steps to improve this situation. An in-house contract to conduct the required studies has been awarded. This may speed up the process of investigating the extent of contamination from UST releases. A necessary second step to improve this situation is to sensitize the Camp Lejeune contracting folks to the regulatory deadlines. It has been LANTDIV's experience that the time to award a change order to a contract to start work on the required studies (approximately 120 days) is greater than the time allowed in the regulations to complete the required studies (45 days). We suggest a meeting be held involving the Environmental Management Department and the Contracting Department at Public Works (or whoever is going to handle this contract) to discuss methods of accelerating the award of change orders to this in-house contract. There may be methods available to expedite the process of awarding change orders to conduct the required studies, which will facilitate completing the required reports on time.

5. TRANSITION FROM UST COMPLIANCE PROGRAM TO USE CLEANUP PROGRAM. This problem also has to do with Camp Lejeune not completing required studies for UST release in the past. The present regulatory deadline for completing the Initial Site Characterization Study is 45 Days. The 45th day clock starts ticking the day you confirm a release from a UST. Delays in starting the process to study that release will make compliance with the 45th day deadline tough to meet. At this time, Camp Lejeune has not set up criteria under which a release has been confirmed, and as such, when a problem is transferred from the UST Compliance Section to the UST Cleanup Section is still up in the air. Failure to handle this transition smoothly will cause excessive delays that will lead to non-compliance with the aforementioned regulatory deadline. LANTDIV's recommendation to remedy this problem is based on the definition of a confirmed

release. In 40 CFR 280, a release is suspected when an UST encounters unusual operating conditions or fails a precision test. A release is confirmed when the presence of contamination is discovered in the environment around the tank, either through discovering free product (such as in a monitoring well) or when samples (of soil or groundwater) are analyzed and come up positive for petroleum. The obtaining and analyzing of samples is called a site check. It is our recommendation that a release be turned over to the UST Cleanup Section after completing the site check (when the presence of contamination in the environment has been confirmed). This definite cutoff will help to expedite starting the investigation/cleanup process, but only when it is definitely needed. To assist activities in confirming the release of regulated substances from USTs, LANTDIV is in the process of awarding a contract specifically set up to complete site checks. This contract will be available for use no later than 23 July 1990. This contract will be set up for fast response in order to facilitate starting the investigation/cleanup process, where needed. We suggest Camp Lejeune consider using this contract for completing site checks. If a site check comes back positive for contamination, then the matter can be turned over immediately to your UST Cleanup Program.

6. INVENTORY CONTROL PROBLEMS. 40 CFR 280.43(a) states that inventory control, if accomplished correctly, can be used in connection with annual UST precision testing to fulfill the leak detection requirements outlined in 40 CFR 280.40(c). As stated in the regulations, the inventory of petroleum in each UST must be tracked in gallons. 40 CFR 280.43(a) states that the inventory control method used must be capable of detecting a release of 1 percent of the monthly throughput plus 130 gallons basis. At this time, the Camp Lejeune gas stations are tracking the inventory of their petroleum on a per tank, per dollar, basis. This is not acceptable according to current regulations.

This is not that big of a problem. Logistics at Camp Lejeune tracks monthly inventory of petroleum on a dollar basis to look for potential thefts of gasoline. It would not be difficult to track your inventories on a per gallon basis at the same time. The dollar to gallons conversion is simple mathematics.

Also, the method of inventory control is of importance here. Improper inventory control can lead to not recognizing releases. No later than 23 September 1990 LANTDIV will have in place two contracts which will be able to provide training in proper inventory control to the Camp Lejeune personnel. We suggest Camp Lejeune take advantage of these contracts to have the personnel involved in inventory control at Camp Lejeune properly trained. This will assist in achieving compliance with 40 CFR 280 and will also assist in the early detection of release of petroleum. This early detection will lead to a great reduction in cleanup costs.

Doc No. CCEJ-0058
12.09-08/01/90

WasteWater

1. There is no formalized training program established for the WWTP operators.

Recommendation: Formalized training program needs to be established in-house for the WWTPS operators as a regular refresher and for continuing education to enhance their skills.

2. Process control tests are not being performed at any of the wastewater treatment plants (WWTPs).

Recommendation: Optimum performance can be maintained at the WWTPs only if the operators can diagnose the process, identify operational problems in advance and take corrective actions. Therefore,the implementation of process control testing by the operators is imperative. It will assist them in selecting and utilizing proper control parameters to insure that the performance of the facilities is maintained at or near the optimum levels.

3. The Operations and Maintenance (O&M) manuals for each of the wastewater collection and treatment systems were not provided on-site at the WWTPs. These documents are being filed at Building Number 670 which is the Holcomb Boulevard Water Treatment Plant.

Recommendation: A copy of the O&M manual needs to be kept on file at each of the WWTPs for the operators. These documents also need to be reviewed/updated on a periodic basis to reflect modification to wastewater collection and treatment facilities.

4. A scheduled preventative maintenance program is not enforced for the wastewater collection and treatment facilities.

Recommendation: A scheduled preventive maintenance program should be initiated in order to reduce equipment malfunctions and to extend the equipment service life as well as to optimize operational efficiency.

5. The sludge drying beds are not being maintained properly at the various WWTPs.

Recommendation: The sludge drying beds need to be kept free of grass and weed growth.

6. The flow meters utilized by the WWTPs for compliance reporting are routinely being calibrated by personnel from the Utilities Branch, Water and Wastewater Section.

Recommendation: The individual(s) who is being tasked to perform flow meters calibration for compliance monitoring needs to receive some type of structured classroom/hands-on training. Training and calibration records should be maintained on file. The training record should contain information on who received training and the source. The calibration record should depict how frequent and by whom these flow meters calibrations are being performed. In the case of close scrutiny by the state regulatory agencies, this documentation will prove that the flow monitoring program is being implemented at a high level of consciousness while establishing validity to the flow monitoring data.

7. All of the WWTPs are experiencing Infiltration/Inflow problems due to the age and deteriorating condition of the wastewater collection system. There may also be significant stormwater entering the collection system through roof leaders, manhole covers, washracks, and etc. Modification of the existing treatment facilities with extra capacity to handle these excessive flows may not be the best solution to the problem. This approach may result in unnecessary capital and operating costs and inefficient treatment.

Recommendation: An analysis of the wastewater collection systems must be made to determine the causes for excessive infiltration. Where economically feasible, an acceptable remedial plan of action should be implemented to correct the situation.

8. Organic matter was settling out in the grit chamber servicing the Rifle Range WWTP due to low flow velocity. The chlorination room has only one chlorinator.

Recommendation: Should it be determined that the organic matter settling out in the grit chamber is more than just a temporary condition, consideration needs to be given toward reducing the cross sectional area of the grit chamber. An extra chlorinator needs to be installed in the chlorination room as backup in order to perform routine maintenance service or in the case of equipment failure.

9. Neither of the secondary clarifiers at the Tarawa Terrace WWTP do not have scum troughs and effluent baffles.

Recommendation: In order for the secondary clarifiers to operate at their peak design efficiency, these units need to be equipped with scum troughs and effluent baffles.

10. The primary and secondary effluent weirs at the Courthouse Bay WWTP were leaking. Very little growth was observed on the media of the Trickling Filters which are being operated in series. These filters were currently receiving low flows. The filter flies population was also significant. The plant final effluent was turbid. A previously abandoned chlorine contact tank had not been filled in or made secure.

Recommendation: The leaking effluent weirs to the primary and secondary clarifiers need to be corrected as soon as possible. The overflow weirs are designed for the uniform distribution of effluent from the surface of these tanks. If this condition is not corrected, the continued short-circuiting of flow under the weirs can compromise the clarifiers' efficiency. Consideration should be given to increasing the recirculation rate in order to apply more flow onto the filters. This action will also increase the efficiency of the Trickling Filters. In this particular case, the filter flies population may be controlled by (a) increasing the recirculation rate, (b) flushing the side walls of the filters by opening the flap valve at the end of the distributor arms, (c) flooding the filters intermittently to prevent completion of the flies life cycle, or (d) the addition of chlorine which is toxic to the flies and larvae.

11. The Camp Johnson WWTP is experiencing an organic overload due to the disposal of pulp wastes from the mess hall into the wastewater collection system. There is also a design problem located between the Trickling Filter and the Secondary Clarifier. This condition contributes to the flooding of the trickling filter underdrain system and causes the plant to experience hydraulic overloads during periods of high flow. The chlorine contact tank has a single chamber. It exhibited an unusual background color. The final effluent was turbid and contained solids.

Recommendation: The mess hall pulp wastes must be pretreated to reduce the organic load on the Camp Johnson WWTP or disposed of by commercial contract off-site. An engineering Service Request should be submitted to LANTDIV Code 405 to evaluate and correct the hydraulic problem between the Trickling Filter and the Secondary Clarifier which is contributing to the hydraulic overload associated with the flooding of the Trickling Filter underdrain system. The chlorine contact tank needs to be cleaned more frequently. Initially, a monthly housekeeping cleaning schedule should be implemented until a less frequent routine can be justified.

12. The Camp Geiger WWTP is experiencing grease problems from the Wendy's Fast Food operation. The primary clarifier effluent weir was leaking. One of the Trickling Filters has a badly leaking seal. The secondary clarifiers have bulking sludge floating on the surface and solids discharging over the weirs. The final effluent being discharged out of the chlorination tank contained high concentration of solids, turbidity and foam. It was also indicated that some of the sludge placed on the drying beds dried very slowly. Noteworthy, the tertiary system of the WWTP is off line for repairs and will not be placed back into operation until January or February 1991.

Recommendation: The grease problem resulting from the Wendy Fast Food operation can be attributed to either a maintenance or design problem. Should it be determined that the grease trap is being adequately serviced, then this facility will need to be evaluated for proper sizing. The primary effluent weir and the leaking trickling filter seal must be repaired as soon as possible. Unless these corrections are made, the WWTP will not be able to operate at optimum efficiency. Manpower requirement to perform the duties at this treatment facility should be appraised. An established in-house continuing educational training program may also prove to be very beneficial toward upgrading the poor quality effluent being discharged from this plant, even though it may not be violating the NPDES permit.

13. Solids and scum were observed floating on the surface of all eight primary clarifiers at the Hadnot Point WWTP. The effluent weir to one of the secondary clarifiers was leaking.

Recommendation: Manpower requirement to perform the duties at this treatment facility should be appraised. Solids and scum floating on the surface of primary clarifiers require much operator attention to insure peak performance. The quantity of floatables appeared more indicative of a lack of attention than an actual process upset. The leaking effluent weir to the secondary clarifier needs to be corrected as soon as possible. The overflow weir is designed for the uniform distribution of effluent from the surface of this tank. Furthermore, the efficiency of the unit will be compromised because of an elevated overflow rate.

14. Most of the sewage pump stations need to be upgraded to current standards to meet OSHA requirements.

Recommendation: The wet wells and dry wells must be provided with positive means of ventilation. Protective railing must be installed around open tanks and other areas contributing to a safety hazard. Explosion-proof motors, controls, and

electrical wiring/lights are to be provided in all hazardous areas (e.g., digester control building, enclosed wet wells, and etc.). Eliminate the possibility of potable water supplies contamination by cross connection with sewage or sludge piping. Flood lights should be provided for nighttime inspection and maintenance.

15. Within the wastewater collection system, there are a total of 96 sewage pump stations. These facilities are being visited once per 24 hours shift. The two patrol trucks personnel consists of a one man crew. They are responsible for performing all the operational, perventive maintenance, and housekeeping duties. In a number of cases, these individuals must go below grade to perform their work in a dry well or a wet well. Eventhough they are required to carry a monitoring device to check for explosive gases and oxygen deficiency before entering the pits, the following circumstances exist: (a) In view of the numbers of pump stations that must be attended during their shift, safety is being sacrificed for speed. It would be extremely difficult for one person to constantly monitor for, any type of unpredictable changes which could occur in the wells atmospheric environment below ground while attempting to perform all his duties during that particular shift. (b) Many of the dry wells and wet wells do not have mechanical forced air ventilation or the equipment is not functioning. (c) These pits should not be taken for granted as safe for they are potential death traps.

Recommendation: No one should enter pits, sumps, wet wells, tanks, and below ground pump rooms alone. There should always be at least one person above grade to observe the individual as he enters, works and leaves. Prior to entrance, be certain that adequate mechanical ventilation is provided and the fan is on to remove gases and supply oxygen. A harness with a safety line should be worn when entering manholes. A self-contained breathing apparatus should be carried on the truck for the above grade person to use in case of an emergency.

COMMENTS

1. Despite budget cuts, personnel shortages, potable water/wastewater systems expansion and certain design deficiencies, the WWTPs are still meeting effluent discharge limits.

2. Routine and preventative maintenance is not being performed and operations are barely meeting state requirements. Costly repairs and replacements will result if maintenance is not performed. Future violations of permits and safety regulations will become more frequent and costly. In order to avoid adverse impact to navigable waters and noncompliance with permit effluent limitations, you must continue to maintain all the wastewater treatment facilities in good working order and operate as efficiently as possible. To assure this continues, it is suggested that a thorough analysis be made of the manpower requirements of the Utilities Branch, Wastewater Section to perform their operation and maintenance tasks.

DOC NO: CLEJ-00588-
12.0f-08101190

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY:	PROBLEM #1 Wastewater SURVEY DATES: 5-8 Jun 1990 LANTDIV Contact for Questions and Assistance: Wallace Carter Telephone: (804)445-2933 (AV 565)
Marine Corps Base Camp Lejeune	

2. PROBLEM DESCRIPTION: The NCDEM continues to collect water quality data on dicharges into State waters of exceptionally high quality. Monitoring of effluent from the Base's seven WWTPs is currently being performed for nutrient (Total Nitrogen and Total Phosphorus) and toxicity. NPDES permits for the WWTPs are scheduled to expire during Calendar Year 1992 and 1993. The State has already indicated that discharges from several of these treatment facilities are in conflict with its goal to upgrade water quality in New River and its tributaries, as well as the Intercoastal Waterway. As future ambient water quality designations and effluent limitations for phosphorus, nitrogen heavy metals, chlorine residual, etc. become more stringent, permit renewal will become increasingly difficult.

3. REFERENCE (Applicable laws, regulations, instructions, etc: 15 NCAC 2B .0101 (e) (5); 15 NCAC 2B .0212 (c) (3) (b); 15 NCAC 2H .0100; 15 NCAC 2H .0404 (a) (c); NCDEM ltr dated on 29 December 1989; NPDES No. NC0062995 (Camp Geiger); NPDES No. NC0063011 (Camp Jonhson); NPDES No. NC0063002 (Tarawa Terrace); NPDES No. NC0063053 (Onslow Beach); NPDES No. NC0063045 (Courthouse Bay); NPDES No. NC0063037 (Rifle Range); and NPDES No. NC0063029 (Hadnot Point).

4. RECOMMENDED CORRECTIVE ACTIONS: The Environmental Planning and Land Use Division needs to immediately initiate a Base-wide Wastewater Management Study. This study must take into account the ever changing regulatory scenario and evaluate various wastewater collection/treatment/disposal alternatives based upon technological feasibility. Such a study may be undertaken contacturally through the combined efforts of LANTNAVFACENGCOM Codes 16, 18 and 405.

5. OTHER INFORMATION (Associated cost estimate, etc.)

12.04-080a/90

12.04-08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: Marine Corps Base Camp Lejeune	PROBLEM #2 Wastewater SURVEY DATES: 5-8 Jun 1990 LANTDIV Contact for Questions and Assistance: Wallace Carter Telephone: (804)445-2933 (AV 565)

2. PROBLEM DESCRIPTION: With the exception of the Hadnot Point WWTP and SFC-315 Pump Station , none of the WWTPS and sewage pump stations have a backflow prevention on the incoming potable water mains and service connections.

3. REFERENCE (Applicable laws, regulations, instructions, etc. CO P11000.8B; Title 10, Chapter 10, Subchapter 10.D, Section 1006.

4. RECOMMENDED CORRECTIVE ACTIONS: Backflow prevention devices must be installed at the WWTPs and sewage pump stations since there is always a potential threat to the public health arising from a backflow condition.

5. OTHER INFORMATION (Associated cost estimate, etc.)

12.64 - 08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY:	PROBLEM #4 Wastewater SURVEY DATES: 5-8 Jun 1990 LANTDIV Contact for Questions and Assistance: Wallace Carter Telephone: (804)445-2933 (AV 565)
Marine Corps Base Camp Lejeune	

2. PROBLEM DESCRIPTION: The treated effluent from the Onslow Beach WWTP discharges into the Intercoastal Waterway. The discharge of WWTP effluent into "SA" waters will be prohibited regardless of treatment (see problem #1). This treatment facility is manned 8 hours per day on Tuesday and Thursday, and 2 hours per day the rest of the week. However, it is not receiving proper operation and maintenance. Organic matter was observed settling out in the grit chamber. Sludge solids were observed floating on the surface of the secondary clarifiers. The exhaust fan for the chlorination room is not working.

3. REFERENCE (Applicable laws, regulations, instructions, etc. 15 NCAC 2B .0212 (c) (3) (b); NPDES No. NC0063053; NCDEM ltr dated 29 December 1989.

4. RECOMMENDED CORRECTIVE ACTIONS: It is most urgent that plans be initiated as soon as possible to address the elimination of this WWTP discharge from the Intercoastal Waterway. During the interim, a full time operator (i.e., 8 hours/day, 7 days/week) needs to be stationed at this plant. The exhaust fan for the chlorination room must also be repaired.

5. OTHER INFORMATION (Associated cost estimate, etc.)

DOC NO: CLEJ-00588-12.04-08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY:	PROBLEM #5 Wastewater SURVEY DATES: 5-8 Jun 1990 LANTDIV Contact for Questions and Assistance: Wallace Carter Telephone: (804)445-2933 (AV 565)
Marine Corps Base Camp Lejeune	

2. PROBLEM DESCRIPTION: There is a leak in the outfall pipe from the Camp Geiger WWTP.

3. REFERENCE (Applicable laws, regulations, instructions, etc.)

NPDES No.NC0062995

4. RECOMMENDED CORRECTIVE ACTIONS: The WWTP outfall pipe must be repaired immediately. Technically, this is a bypass or unpermitted discharge which violates the NPDES permit for this facility. The WWTP effluent is permitted for end of the pipe discharge to be disposed of an adequate distance off-shore and at a point of adequate in-stream mixing.

5. OTHER INFORMATION (Associated cost estimate, etc.)

Doc NO: CLEJ-00588-12.04-08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: Marine Corps Base Camp Lejeune	PROBLEM #6 Wastewater SURVEY DATES: 5-8 Jun 1990 LANTDIV Contact for Questions and Assistance: Wallace Carter Telephone: (804)445-2933 (AV 565)

2. PROBLEM DESCRIPTION: Sewage sludge from the Camp Geiger WWTP is being stockpiled at an unpermitted site located down a road not far from the treatment facility. In addition, the method of final disposal for the WWTPs sludges/solids needs to be described and submitted to the NCDEM in the form of a Sludge Management Plan.

3. REFERENCE (Applicable laws, regulations, instructions, etc.)

NCGS 143-215.1; 40 CFR 501.15; NPDES No. NC0062995 Camp Geiger); NPDES No. NCO063011 (Camp Johnson); NPDES No. NC0063002 (Tarawa Terrace); NPDES No. NC0063053 (Onslow Beach); NPDES No. NC0063045 (Courthouse Bay); NPDES No. NC0063037 (Rifle Range); and NPDES No. NC0063029 (Hadnot Point); 15 NCAC 2H .0200.

4. RECOMMENDED CORRECTIVE ACTIONS: The stockpiling of sewage sludge at Camp Geiger must be discontinued. Remove the current stockpiled sludge and dispose of material at the Base permitted sanitary landfill. A Sludge Management Plan should be prepared and submitted as a single document for all seven (7) WWTPs. This Plan should identify the method of sludge stabilization, quantity/quality of sludge, removal, transportation and disposal. Disposal needs to be addressed in accordance with the sanitary landfill permit requirements. The appropriate sections of the permit for landfilling of the sludge may be attached as part of this Plan.

5. OTHER INFORMATION (Associated cost estimates, etc.)

12.04-08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCB Camp Lejeune	PROBLEM #1 SURVEY DATES: 21-24 May 90 LANTDIV Contact for Questions and Assistance: S.G. Martin Telephone: 445-4719

2. PROBLEM DESCRIPTION:

The training records for the personnel maintaining the 90 day HW storage sites do not clearly indicate that the facility personnel were trained in emergency procedures and hazardous waste management procedures relevant to their positions.

3. REFERENCE (Applicable laws, regulations, instructions, etc)

40 CFR 262.34(a)(4) (which refers to 40 CFR 265.16), this reference requires certain elements in the hazardous waste training with an emphasis on emergency procedures and hazardous waste management.

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

Institute a consistent hazardous waste training program for all personnel involved in hazardous waste operations. Clearly document what the training consisted of with regard to the requirements in the personnel folders.

5. OTHER INFORMATION (Associated cost estimate, etc.)

Eleven 90 day hazardous waste storage sites were visisted out of more than 100 that exist. Overall level of compliance with training requirements by RCRA was excellent.

12.04 - 08/01/90

1. The weekly inspections of the 90 day storage areas were not complete or up to date at the following locations; Naval Hospital; SRIG (Building FC-365); 2D FSSG (Building FC-100); 20 MARDIV (Building HP-250).

2. 40 CFR 264.15 (refers to 264.174 for containers). This reference requires weekly inspections of areas managing hazardous waste containers.

3. Elevate the importance of the weekly inspection requirement within the 4 commands cited.

4. Note: The Naval Hospital and SRIG had container management deficiencies that could possibly be tied to lack of weekly inspections.

3

1. Hazardous waste container management deficiencies were noted at the following 90 day storage areas: (1) Naval Hospital (container of solid HW with HW spilled on top); SRIG, Building FC-365 (HW Lithium batteries unlabeled and without accumulation start dates); 2D MARDIV, Building HP-100 (3 drums of HW exceeded 90 day limit); MCB Training Support Division, Building 7 (one drum of HW with no label and no date).

2. 40 CFR 262.34 requires hazardous waste containers at 90 day storage areas to meet certain requirements.

3. The problems at two of the sites may have been avoided had the weekly inspections been performed (SRIG, Building FC-365 and Naval Hospital).

   Elevate the importance of the requirements to each command.

4. Note: Eleven 90 day storage site were visited out ot over one hundred. Overall container management was good.

DOC NO. 12.04-08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCB Camp Lejeune	PROBLEM # 1 SURVEY DATES: 5-29/6-1-90 LANTDIV Contact for Questions and Assistance: S. G. Martin Telephone: A/V 565-4719

2. PROBLEM DESCRIPTION:

MCB Camp Lejeune has lead contaminated washrack grit stored at 946 washrack area. This material has failed the EP toxic level for lead. The storage qualifies as a hazardous waste pile in violation of Camp Lejeune's Part B permit for storage of hazardous waste.

3. REFERENCE (Applicable laws, regulations, instructions, etc)

The following apply 40 CFR 264: subpart L (Hazardous Waste Piles); Subpart F (Releases from Solid Waste Management Units); Subpart G (Closure and Post Closure)

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

1) Notify the NC Department of Environment, Health and Natural Resources that the waste pile exists. They will most certainly require a closure plan.
2) Prioritize a solution to disposal method either DRMO or new contract managed by MCB Camp Lejeune.
3) Develop closure plan

5. OTHER INFORMATION (Associated cost estimate, etc.)

LANTDIV has an Indefinite Quantity Contract that could be used to develop a closure plan for this waste pile.

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LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCB Camp Lejeune	PROBLEM # SURVEY DATES: 5/29/6-1-90 LANTDIV Contact for Questions and Assistance: S. G. Martin Telephone: A/V 565-4719

2. PROBLEM DESCRIPTION:

MCB Lejuene has significant amounts of petroleum contaminated soil stored at various sites across the base. Disposal through the current DRMO contract would cost $1200/ton or 1,100,000 for the 930 tons on hand. This waste continues to be generated by various spills on soil by the squadrons.

3. REFERENCE (Applicable laws, regulations, instructions, etc)

"Guidelines for Remediation of Soil Contaminated by Petroleum" by the NC Department of Environment, Health, and Natural Resources. These guidelines regulated soil containing more than 10 ppm total petroleum hydrocarbons.

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

An A&E study on disposal of petroleum contaminated soil was sent to MCB Camp Lejeune (D. Piner) on 20 July 90. This study presents a disposal option more economical than the DRMO cost cited above. The suggested process is enhanced evaporation and combustion of hydrocarbons in the fuel. This can be conducted on site or in Norfolk, VA by Soil Remediation, Inc.

5. OTHER INFORMATION (Associated cost estimate, etc.)

Cost estimate is $60/ton for outside treatment; $94/ton offsite treatment. Offsite cost estimate includes bulk transportation cost and landfill cost.

08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCB Camp Lejeune Hadnot Point	PROBLEM #2 SURVEY DATES: 5-29 thru 6-1-90 LANTDIV Contact for Questions and Assistance: L. Speas & C. Wallace Telephone: 565-6645, 565-6982

2. PROBLEM DESCRIPTION: Maintenance Shops
Excessive grit accumulation grit pits and oil/water separators at vehicle washracks. Causing short circuiting through separators and even overflows to storm ditches from grit pit emergency overflow lines. In addition, grit disposal is a problem. Facilities seem to have a problem with getting grit picked up (by DRMO?) after they clean the grit pits. Some facilities stock-piling grit on part of washracks or on ground (pavement).

3. REFERENCE (Applicable laws, regulations, instructions, etc)

Section 301.A of Clean Water Act - Prohibition of unpermitted discharges. N.C. Administrative Code 15 NCAC 2H.0100 Wastewater Discharges to Surface Waters (Specifically 2H.0100.0127)

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

Provide efficient means for disposal of contaminated grit. Facilities should initiate routine cleanup/maintenance of grit pits and separators. permit overflow pipes under Certificate of Coverage obtained from NC DEM.

5. OTHER INFORMATION (Associated cost estimate, etc.)

See attached sheet for listing.

TOC NO. COEJ - 00580 - 12.04
08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCB Camp Lejeune Hadnot Point	PROBLEM #1 SURVEY DATES: 5-29 thru 6-1-90 LANTDIV Contact for Questions and Assistance: L. Speas & C. Wallace Telephone: 565-6645, 565-6982

2. PROBLEM DESCRIPTION:

Building HP670 - Water Treatment Plant

Backwash pond level high due to solids accumulation. Evidence of overflows from pond through emergency pipe to ditch parallel with the adjacent railroad track.

3. REFERENCE (Applicable laws, regulations, instructions, etc)

Section 301.A of Clean Water Act - Prohibition of unpermitted discharges. N.C. Administrative Code 15 NCAC 2H.0100 Wastewater Discharges to Surface Waters (Specifically 2H.0100.0127)

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

Solid removal maintenance shall be initial to maintain a minimum of 12" between the normal backwash highwater level and the discharge pipe invest. 12" free is required to prevent discharge from the pond during storm events. Permit overflow pipe under Certificate of Coverage obtained from NC DEM.

5. OTHER INFORMATION (Associated cost estimate, etc.)

Pond is lined. Problem with puncturing liner during solids removal. Activity is aware of solids accumulation problem and is planning on removaling solids by hand.

12.04 - 08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCAS New River	PROBLEM #17 SURVEY DATES: 6-1-90 LANTDIV Contact for Questions and Assistance: L. Speas & C. Wallace Telephone: 565-6645, 565-6982

2. PROBLEM DESCRIPTION: AS 4155 Steam Plant Fuel Transfer Station. No containment provided. Pad drains directly to a storm ditch. If spill occurs off-loading activities, fuel would drain directly of adjacent receiving stream in violation of SPCC.

3. REFERENCE (Applicable laws, regulations, instructions, etc)

40 CFR Part 112 Oil Pollution Prevention - Section 112.7 Guidelines for the Preparation and Implementation of Spill Prevention Control and Countermeasure Plan.

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

Provide new truck unloading facility to meet current SPCC design criteria storage must be provide for the largest compartment of fuel delivery truck should it rupture.

5. OTHER INFORMATION (Associated cost estimate, etc.)

Submit PCR and secure CMC PA $80K funding and initate a construction project.

12.04-08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCB Camp Lejeune Hadnot Point	PROBLEM #3 SURVEY DATES: 5-29 thru 6-1-90 LANTDIV Contact for Questions and Assistance: L. Speas & C. Wallace Telephone: 565-6645, 565-6982

2. PROBLEM DESCRIPTION: Building HP 1700 - Steam Plant Steam condesate from ash suppression system on old Ash Silo is entering a storm drain. This storm drain discharges to Beaver Dam Creek. Heavy accumulation of fly ash in Creek (location - next to Exchange).

3. REFERENCE (Applicable laws, regulations, instructions, etc)

Section 301.A of Clean Water Act - Prohibition of unpermitted discharges.

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

Tie ash silo discharge into existing grit chamber (approximately 8 ft. away) which discharges to sanitary sewer system. Recommend cleaning out the old grit chamber and transfer liquid with a pipe to the new ash grit separator pit. Do this immediately.

5. OTHER INFORMATION (Associated cost estimate, etc.)

Activity aware of problem. Project currently under construction to replace Ash Silo System. Housekeeping in area needs to be improved to reduce non-point source pollution.

DOCNO: 0205-0000-
12.04 - 08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCAS New River	PROBLEM #17 SURVEY DATES: 6-1-90 LANTDIV Contact for Questions and Assistance: L. Speas & C. Wallace Telephone: 565-6645, 565-6982

2. PROBLEM DESCRIPTION: Building AS-4135 Ground Support Maintenance Facility. POL and Hazardous Waste Storage has no secondary containment.

3. REFERENCE (Applicable laws, regulations, instructions, etc)

40 CFR Part 112 Oil Pollution Prevention - Section 112.7 Guidelines for the Preparation and Implementation of Spill Prevention Control and Countermeasure Plan.

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

Provide enclosed facility for POL and Hazardous Waste Storage for secondary containment.

5. OTHER INFORMATION (Associated cost estimate, etc.)

Estimated construction cost $60K. Submit PCR to CMC and initiate construction project.

12.04-08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCB Camp Lejeune	PROBLEM #17 SURVEY DATES: 6-1-90 LANTDIV Contact for Questions and Assistance: L. Speas & C. Wallace Telephone: 565-6645, 565-6982

2. PROBLEM DESCRIPTION: Building HP1780 - 2nd Echelon Maintenance Shop washrack not in use as a washrack - used for storage of POL and Hazardous Waste. If spill were to occur, could reach adjacent storm ditch through grit pit emergency overflow line.

3. REFERENCE (Applicable laws, regulations, instructions, etc)

40 CFR Part 112 Oil Pollution Prevention - Section 112.7 Guidelines for the Preparation and Implementation of Spill Prevention Control and Countermeasure Plan.

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

Plug emergency overflow line in grit pit to provide for secondary containment.

5. OTHER INFORMATION (Associated cost estimate, etc.)

Estimated construction cost $60K submit PCR to CMC and initiate construction project.

Va No. 1205-00508-1204 - 08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCAS New River	PROBLEM #17 SURVEY DATES: 6-1-90 LANTDIV Contact for Questions and Assistance: L. Speas & C. Wallace Telephone: 565-6645, 565-6982

2. PROBLEM DESCRIPTION: Water Treatment Plant Backwash Pond Emergency overflow weir which discharges to Creek is not permitted.

3. REFERENCE (Applicable laws, regulations, instructions, etc)

Section 301.A of Clean Water Act - Prohibition of unpermitted discharges. NC Administrative Code 15 NCAC 2H.0100.0127 Wastewater Discharges to State Waters - Certificate of Coverage.

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

Obtain permit for emergency overflow weir under a Certificate of Coverage obtained from NC DEM.

5. OTHER INFORMATION (Associated cost estimate, etc.)

One Certificate of Coverage can cover all similar discharges on the Base.

12.04-08/01/90

LANTNAVFACENGCOM
ENVIRONMENTAL COMPLIANCE EVALUATION
PROBLEM NOTIFICATION FORM

1. ACTIVITY: MCB Camp Lejeune Courthouse Bay	PROBLEM #17 SURVEY DATES: 6-1-90 LANTDIV Contact for Questions and Assistance: L. Speas & C. Wallace Telephone: 565-6645, 565-6982

2. PROBLEM DESCRIPTION: A-47 AMPTRAC Maintenance Facility Covered Wash Racks for Detail Washing. Overflow from grit chamber discharges to Courthouse Bay. At this outfall there is an oil absorbent boom which is saturated with oil. Also, heavy oil sheen behind boom.

3. REFERENCE (Applicable laws, regulations, instructions, etc)

Section 301.A of Clean Water Act - Prohibition of unpermitted discharges. NC Administrative Code 15 NCAC 2H.0100.0127 Wastewater Discharges to State Waters - (Specifically 2H.0100.0127)

4. RECOMMENDED CORRECTIVE ACTIONS (including any mandated scheduling)

Replace absorbent boom. Permit discharge under Certificate of Coverage as described in Problem #2.

5. OTHER INFORMATION (Associated cost estimate, etc.)

Doc. No.: [illegible]

DEPARTMENT OF THE NAVY
OFFICE OF INFORMATION
WASHINGTON, D.C. 20350-1200

IN REPLY REFER TO

SECNAVINST 5720.44A CH-1
CHINFO 50D

19 September 1990

SECNAV INSTRUCTION 5720.44A CHANGE TRANSMITTAL 1

From: Secretary of the Navy
To: All Ships and Stations

Subj: DEPARTMENT OF THE NAVY PUBLIC AFFAIRS POLICY AND REGULATIONS

Encl: (1) Revised pages ix, xix and xxi, and reprinted pages x, xx, and xxii
(2) Revised pages 1-1, 1-3, 1-5, 1-6, 1-8, 1-9, 1-10 and 1-15, reprinted pages 1-2, 1-4, 1-7, and 1-16, and new pages 1-9a and 1-9b
(3) Revised pages 2-1, 2-2, 2-3, 2-5, 2-6, 2-7, 2-8, 2-11, 2-12, 2-14, 2-15, 2-25 through 2-29, 2-33, and 2-38 through 2-40, reprinted pages 2-4, 2-13, 2-16, 2-30, 2-34 and 2-37, and new pages 2-7a, 2-7b, 2-11a and 2-11b
(4) Revised pages 3-1, 3-2, 3-5, 3-6, 3-36, 3-52, 3-62, 3-64, reprinted pages 3-35, 3-51, 3-61, 3-63, and new pages 3-66a and 3-66b
(5) Revised pages 4-1, 4-2, 4-33, 4-34, 4-35, 4-40, 4-46, 4-66, reprinted pages 4-36, 4-39, 4-45, 4-65, and new pages 4-34a and 4-34b
(6) Revised pages 5-11, 5-23, 5-24, 5-30, 5-31, 5-46, and reprinted pages 5-12, 5-29, 5-32, and 5-45
(7) Revised page 6-44, reprinted page 6-43, and new pages 6-44a and 6-44b
(8) Revised pages 7-1 through 7-3
(9) Revised pages 8-25 through 8-28, 8-53 and 8-54
(10) Revised yellow pages 2-30a and 2-30b
(11) Revised yellow pages 8-16c and 8-16d, and new pages 8-16e and 8-16f

1. Purpose. To correct and update the original instruction. Updates are due to additional or new policy. Major changes have been made in the areas of the Privacy and Freedom of Information Acts, command information bureau organization, internal information, cable television contracting, family support during crises, drug interdiction operations, and community relations requirements during environmental actions.

2. Action

a. Remove pages ix, x, xix, xx, xxi, and xxii and replace with enclosure (1) of this change transmittal.

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SECNAVINST
19 SEP
DOC NO: CLEJ - 00583-
12.04 - 09/19/90

SECTION C:

HAZARDOUS WASTE SITE CLEANUPS

(R

0811 INTRODUCTION

a. History. The military services use and produce large quantities of hazardous materials and waste products. Lack of stringent legislation in the past led to the use of expedient disposal methods that now threaten human health and the overall quality of the environment. Past hazardous waste disposal relied on burial. Although acceptable at the time, that method over the long term has led to the spread of contaminants largely through release in soil and ground water. The process, called migration, has resulted in wastes moving from the land area in which they were originally deposited into other public and private lands. Installation Restoration (IR) is the DoN program for identifying and cleaning hazardous waste sites.

b. Basic IR Phases. The IR program, governed by reference (l), consists of three basic phases of action. Two involve the identification of waste sites and an evaluation of their environmental impact, and the third deals with corrective measures.

(1) Preliminary Assessment/Site Inspection (PA/SI) Study. The PA/SI, formerly called initial assessment studies within the Navy, involve a record review, both at the activity itself and elsewhere, and an on-site examination of the activity's waste disposal history and identification of any potential pollutant problems. (R

(2) Remedial Investigation/Feasibility Study (RI/FS). The RI/FS, formerly called the confirmation studies within the Navy, consists of on-site, physical or analytical testing or monitoring of suspected pollutants at a site. The RI/FS will usually include soil and ground water sampling and analysis. A study of remedial alternatives is also done as part of the RI/FS.

(3) Remedial Action (RA). If the RI/FS reveals the need for corrective action, such action will be taken in the RA phase and programmed using Defense Environmental Restoration Account (DERA) funds. First priority will be given to remedial actions to control contamination migrating from Navy or Marine Corps owned property when such migration poses an immediate threat to the health and welfare of the installation or the adjacent community. (R

c. Clearance for Non-DOD Site Inspectors. Upon presentation of proper credentials, authorized representatives of state or federal environmental protection agencies must be allowed to enter a Navy or Marine Corps facility at reasonable times to examine or copy records, inspect inactive hazardous substance disposal facilities and to take samples. Proper credentials include an appropriate security clearance and a valid inspection purpose (e.g., Clean Air Act Inspection as opposed to OSHA inspection). See Section 11203(b)(2) of reference (l).

d. The National Priorities List (NPL). The NPL is a listing by the Environmental Protection Agency of the nation's worst hazardous waste sites. The listing, required by the Comprehensive Environmental Response, Compensation and Liabilities Act (CERCLA), includes federal installations as well as private sites. Each site listed in the NPL is required by EPA Regulations (at 40 C.F.R. 300.67) to follow a (R

12.04-09/19/90

0812

Community Relations* Plan. See Article 0812 (IR-required Community Relations Plan).

e. **Study Release Policy.** It is DoN policy to provide completed studies to the news media and concerned local individuals and organizations on request. The following guidance is in keeping with the policy:

(1) Local and state officials, news media, interested organizations and individuals should be kept apprised of the IR activity at the commencement and conclusion of each phase of work. Completed studies should be released as soon as practical. The activity commanding officer is responsible for study release. As with all public disclosures, studies and related statements will undergo security and policy review before release. When environmental or public relations impact is expected to extend beyond the immediate area of the activity, the command should coordinate release of the study with the cognizant area coordinator.

(2) IR and related studies must be released to the cognizant EPA Regional Office and the appropriate state agency within 30 days of receipt of the study by the concerned activity.

(3) When local interest is high, periodic status reports of the field activities of the contractor performing the study should be provided.

(4) PAOs must coordinate the release of all information and preparation of contingency questions and answers with both the installation public works officer and the appropriate Naval Facilities Engineering Command Engineering Field Division representatives.

f. **Basic Points of Emphasis.** Commanders and their PAOs are encouraged to discuss IR studies and remedial actions within their areas of cognizance with local news media, civic and environmental organizations and individuals. Every effort should be made to avoid the impression that the Navy or Marine Corps is hiding an adverse environmental condition or withholding information on former hazardous waste sites. Points to emphasize include:

(1) The Navy and Marine Corps are concerned about and committed to protecting the environment. Commands will continue to pursue vigorous remedial action to clean up pollutants.

(2) Past hazardous waste disposal methods, although acceptable at the time, have often caused problems as long term characteristics of pollutants and land disposal became known.

(3) State and local agencies will be notified without delay by Navy or Marine Corps officials if health, welfare or other environmental problems are identified--even before publication of final technical reports.

(4) If an immediate hazard to human health or the environment is identified, remedial action will begin immediately.

*Although the EPA titles it a Community Relations Plan, most of the actions in the plan are public information efforts aimed at the local community.

0812 OTHER IR REQUIREMENTS (R

a. IR Community Relations Plan Requirements. The intent of public affairs involving hazardous waste problems is to present factual and timely information, obtain community feedback, dispel rumors and promote understanding. Public affairs efforts are not intended to persuade the public to support a given study outcome or disposal action. Accordingly, technical expertise is required to assist in the development of public affairs plans and initiatives related to hazardous waste. It is normally furnished by the installation Public Works Officer, Environmental Coordinator, and the Naval Facilities Engineering Command Engineering Field Division.

(1) The Plan must take into account the mandatory 21-day public comment period that precedes final selection of remedial action.

(2) The Plan must consist of:

(a) Background and history of community involvement at the site, including local activity and interest, key issues and site history;

(b) IR objectives for the particular site;

(c) Community relations activities to be used to meet stated objectives;

(d) A mailing list of the affected groups and individuals, plus a list of Navy, EPA and other agency officials responsible for community relations.

(3) The Community Relations Plan must be based on discussions with state and local officials, civic and community organizations, and interested residents to gain a first-hand understanding of the major community issues, the level of public interest and the information needs of the citizens. In early meetings with citizens, commands should be more intent on receiving input from them rather than furnishing information. Try to identify the real concerns of citizens (e.g., threats to health) which may be masked by emotional demands to effect immediate clean-up. Tell citizens that their contributions are valuable. Some may have technical expertise or offer information about responsible parties, the extent of off-site contamination, health hazards, etc.

(4) Public information activities must be closely integrated with the technical activities of site study and remedial action. A close working relationship should be built between the technical response staff, public affairs staff and contractors supporting the efforts.

(5) Decision Documents (i.e., those used to select the remedial action) must indicate in what ways community contribution was considered by decision

12.04-09/9/98

makers and how it was incorporated into response plans.

b. Technical Review Committee (TRC). Regardless of the level of public interest at a site, the Superfund Amendments and Reauthorization Act (SARA) A) requires a TRC be established. Comprising representatives of the Navy (activity and EFD), EPA, the state environmental agency and the impacted community, the TRC is a management element brought into play at the early stages of IR.

(1) The purpose of the TRC is to collect technical input from the regulators and the public on the problem being faced, and lay before regulators and the public member, the alternatives the Navy or Marine Corps will be considering to remedy the problem.

(2) The PAO can recommend citizens who could serve as the community representative. The PAO will attend TRC meetings as a staff assistant to the commanding officer to keep abreast of the total IR program and assess the changing information needs of the local communities, officials, et. al.

c. Information Repositories. Information repositories shall contain, at a A) minimum, copies of final reports on studies already conducted, copies of news releases, fact sheets, handouts, the Community Relations Plan and the minutes of the TRC meetir gs. Locations for information repositories shall be publicized through news releases and mailings to ensure that citizens know where they may review documents.

DOC. NO.: OLCV - 00047 - 12.04 - 01 / 11

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET, N.E.
ATLANTA, GEORGIA 30365

4WD-RCRA & FFB

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Commander, Atlantic Division
Naval Facilities Engineering Command
Code 1822
Attn: Ms. Laurie A. Boucher, P.E.
Remedial Project Manager for MCB Camp Lejeune
Norfolk, Virginia 23511-6287

RE: Interim Remedial Action Guidance
Marine Corps Base Camp Lejeune, North Carolina

Dear Ms. Boucher:

As requested at our April 16, 1991, meeting, EPA is providing the Navy with guidance on the process and documentation to support a Record of Decision (ROD) for an interim remedial action under CERCLA. The underlying authority for interim remedial action may be found in EPA's program management principles for Hazardous Substance Response in 40 CFR 300.430(a)(1) and (f)(ii)(C)(1) of the National Contingency Plan (NCP) which states in part:

> Sites should generally be remediated in operable units[1] when early actions are necessary or appropriate to achieve significant risk reduction quickly, when phased analysis and response is necessary or appropriate given the size or complexity of the site, or to expedite completion of total site cleanup.

The remedy selection process for an interim remedial action may be initiated at any time during the remedial process. To implement an early action under remedial authority, an operable unit for which an interim remedial action is appropriate is identified. The only prerequisite for an interim remedial action operable unit is that it should not be inconsistent with nor preclude implementation of the final remedy.

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[1] The term "operable unit" used in the context of interim action simply means a discrete action that comprises an incremental step toward final site cleanup.

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Data sufficient to support the Interim Action Record of Decision (ROD) is extracted from past or ongoing RI/FS work for the site or operable unit[2] and an appropriate set of alternatives is evaluated. Few alternatives, and perhaps only one "action" alternative, need to be developed for interim actions (note: the no action alternative will always be carried through the alternatives analysis even if only one action alternative is being considered). A completed baseline risk assessment generally will not be available or necessary to justify an interim action. Qualitative risk information should be compiled to demonstrate that the action is necessary to stabilize the site, prevent further degradation, or achieve significant risk reduction quickly. Supporting data and risk information should be documented in a focused RI report. The criteria under statute (i.e., "Nine Point Criteria") to be evaluated may be limited to those which apply specifically to the action(s) under consideration. In cases where the relevant data can be summarized briefly and the alternatives are few and straightforward, it may be adequate to document this supporting information in the proposed plan which is issued for public comment. This information should also be summarized in the ROD. While the documentation of interim remedial action decisions may be more streamlined than for final action, all public, State, EPA, and Natural Resource Trustee participation procedures contained in the NCP, as relates to the final ROD, should be followed.

To illustrate how an interim remedial action could be utilized at Marine Corps Base Camp Lejeune, consider the following example for the Hadnot Point Industrial Area. The Navy has submitted a "Limited Site Scope of Work for Hadnot Point...", has conducted recent field work and is even starting limited cleanup action (free product removal at the tank farm). Existing data from these previous studies indicates that a large plume of contamination is moving unchecked through the surficial aquifer towards the New River. The Navy wishes to characterize the site by determining source areas and eventually remediate sources of contamination as well as the contamination itself. Prior to initiating this work for source characterization, the Navy should prepare and submit to EPA an expedited RI/FS report for interim remedial action for the Hadnot Point Industrial Area surficial aquifer. The Navy should also issue for public comment a proposed plan for interim action. The proposed plan need only summarize the supporting data to justify the action, provide qualitative risk information, describe one or more alternatives, and summarize the results of the alternative(s) analysis against the nine point criteria of 40 CFR 300.430(e)(9)(iii). Evaluation criteria ("Nine Point") relevant to the evaluation of the interim remedial action need not be addressed in detail. Rather, their irrelevance to the decision should be noted briefly. Following the public comment period, the Navy would submit a draft ROD to EPA for review which summarizes the information contained in the proposed plan and the response to public comments.

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[2] The term "operable unit" used in this context means a portion of a site undergoing a RI/FS.

DOC. NO.: [illegible]

Enclosed is a draft copy of the current guidance on interim remedial action documents. If you need further information on interim remedial action, this subject is discussed in the preamble to the NCP beginning on page 8704 (March 8, 1990, Federal Register). I urge you to contact me at (404) 347-3016, if you still have questions after reviewing these referenced documents.

Sincerely yours,

Carl R. Froede Jr.

Carl R. Froede Jr.
Remedial Project Manager
DOD Remedial Unit
RCRA and Federal Facilities Branch
Waste Management Division

Enclosure

cc: Mr. Jack Butler, NCDEHNR
Ms. Stephanie Del-Re Johnson, MCB Camp Lejeune

DOC.NO.: CLEJ-00647-12.04-05/01/91

DRAFT

United States Environmental Protection Agency

Office of Solid Waste and Emergency Response

Superfund Publication: 9355.3-02FS-3 March 1991

EPA

Guide to Developing Superfund No Action, Interim Action, and Contingency Remedy RODs

Office of Emergency and Remedial Response
Hazardous Site Control Division OS-220W

Quick Reference Fact Sheet

This guide provides quick reference to the essential components of Records of Decision (RODs) that are prepared to document three specific types of remedial action decisions: (1) **no action**; (2) **interim actions**; and (3) **contingency remedies**. In preparing one of these three types of RODs, RPMs should modify the format of the "standard ROD" for final response actions (see Highlight 1) as indicated in this guide (i.e., sections of the standard ROD that have been crossed out should be eliminated, and sections appearing in bold should be modified according to the directions provided). Sections of the standard ROD that are not crossed out or do not appear in bold should be prepared as in a standard ROD. More detail on preparing these three types of RODs is provided in Chapter 9 of the *Interim Final Guidance on Preparing Superfund Decision Documents* (OSWER Directive 9355.3-02).

DOCUMENTING NO ACTION DECISIONS

EPA may determine that no action (i.e., no treatment, engineering controls, or institutional controls[1]) is warranted under the following general sets of circumstances:

- When the site or a specific problem or area of the site (i.e., an operable unit) poses no current or potential threat to human health or the environment;
- When CERCLA does not provide the authority to take remedial action; or
- When a previous response eliminated the need for further remedial response.

Examples of potential situations where no action decisions may be appropriate are provided in Highlight 2. The remainder of this section outlines ROD formats to use for situations under which a no action ROD may be warranted.

[1] An alternative may include monitoring only and be considered "no action."

HIGHLIGHT 1
OUTLINE FOR THE STANDARD ROD

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose
- Assessment of the Site
- Description of the Selected Remedy
- Statutory Determinations
- Signature and Support Agency Acceptance of the Remedy

2. Decision Summary

- Site Name, Location, and Description
- Site History and Enforcement Activities
- Highlights of Community Participation
- Scope and Role of Operable Unit
- Site Characteristics
- Summary of Site Risks
- Description of Alternatives
- Summary of Comparative Analysis of Alternatives
- Selected Remedy
- Statutory Determinations
- Documentation of Significant Changes

3. Responsiveness Summary

- Community Preferences
- Integration of Comments

DRAFT

HIGHLIGHT 2
SITUATIONS WHERE NO ACTION DECISIONS MAY BE APPROPRIATE

- Where the baseline risk assessment concluded that conditions at the site pose no unacceptable risks to human health and the environment. –
- Where a release involved only petroleum product that is exempt from remedial action under CERCLA section 101.
- Where a previous removal action eliminated existing and potential risks to human health and the environment such that no further action is necessary.

NO ACTION SITUATION #1: ACTION NOT NECESSARY FOR PROTECTION

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose
- ~~Assessment of the Site~~
- **Description of the Selected Remedy:** The lead agency should state that no action is necessary for the site or operable unit, although it may authorize monitoring to verify that no unacceptable exposures to potential hazards posed by conditions at the site or operable unit occur in the future.
- ~~Statutory Determinations~~
- **Declaration Statement:** None of the Section 121 statutory determinations are necessary in this section. Instead, the lead agency should state briefly that no remedial action is necessary to ensure protection of human health and the environment.
- Signature and Support Agency Acceptance of the Remedy

2. Decision Summary

- Site Name, Location, and Description
- Site History and Enforcement Activities
- Highlights of Community Participation
- Scope and Role of Operable Unit or Response Action
- Site Characteristics
- **Summary of Site Risks:** The information in this section provides the primary basis for the no action decision. The discussion should support the determination that no remedial action is necessary to ensure protection of human health and the environment. The lead agency should explain the basis for its conclusion that unacceptable exposures to hazardous substances will not occur. (In most cases, this will be based on the baseline risk assessment conducted during the remedial investigation (RI).) In limited cases where alternatives were developed in the feasibility study (FS), the lead agency should reference the RI/FS Report.
- ~~Description of Alternatives~~
- ~~Summary of Comparative Analysis of Alternatives~~
- ~~Selected Remedy~~
- ~~Statutory Determinations~~
- Explanation of Significant Changes

3. Responsiveness Summary.

NO ACTION SITUATION #2: NO CERCLA AUTHORITY TO TAKE ACTION

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose
- ~~Assessment of the Site~~
- **Description of the Selected Remedy:** The lead agency should state that no action is necessary for the site or operable unit, although it may authorize monitoring to verify that no unacceptable exposures to potential hazards posed by conditions at the site or operable unit occur in the future.
- ~~Statutory Determinations~~
- **Declaration Statement:** No Section 121 statutory determinations are necessary in this section. This section should explain that EPA does not have authority under CERCLA Sections 104 or 106 to address the problem(s) posed by the site or operable unit. If the problem has been referred to other authorities, this should be explained.
- Signature and Support Agency Acceptance of the Remedy

DRAFT

2. Decision Summary

- Site Name, Location, and Description
- Site History and Enforcement Activities

Highlights of Community Participation

- Scope and Role of Operable Unit or Response Action
- Site Characteristics
- Summary of Site Risks
- ~~Description of Alternatives~~
- ~~Summary of Comparative Analysis of Alternatives~~
- ~~Selected Remedy~~
- **Statutory Authority Finding:** The concluding statement of the absence of CERCLA authority to address the problem should be the same as in the Declaration.
- Explanation of Significant Changes

3. Responsiveness Summary.

NO ACTION SITUATION #3:
NO FURTHER ACTION NECESSARY

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose
- ~~Assessment of the Site~~
- **Description of the Selected Remedy:** The lead agency should state that no action is necessary for the site or operable unit, although it may authorize monitoring to verify that no unacceptable exposures to risks posed by conditions at the site or operable unit occur in the future.
- ~~Statutory Determinations~~
- **Declaration Statement:** This Declaration should state that it has been determined that no further remedial action is necessary at the site or operable unit. The Declaration should explain that a previous response(s) at the site or operable unit eliminated the need to conduct additional remedial action. This section also should note whether a five-year review is required. Section 121(c) of CERCLA requires a five-year review of any earlier post-SARA remedy that eliminated the need to take further action (i.e., using engineering and/or institutional controls to prevent unacceptable exposures), yet resulted in hazardous substances, pollutants, or contaminants remaining at the site. As a matter of policy, EPA should generally perform a five-year review for pre-SARA remedies and removal actions that result in hazardous substances remaining on site, and any remedial action that requires five or more years to attain the cleanup levels specified in the ROD.
- Signature and Support Agency Acceptance of the Remedy

2. Decision Summary

- Site Name, Location, and Description
- Site History and Enforcement Activities
- Highlights of Community Participation
- Scope and Role of Operable Unit or Response Action
- Site Characteristics
- **Summary of Site Risks:** The information in this section provides the primary basis for the no action decision. The discussion should support the determination that no further remedial action is necessary to ensure protection of human health and the environment. The lead agency should explain the basis for its conclusion that unacceptable exposures to hazardous substances will not occur. (In most cases, this will be based on the baseline risk assessment conducted during the remedial investigation (RI).) Any previous responses that were conducted at the site or operable unit that served to eliminate the need for additional remedial action should be summarized in this discussion. In limited cases where alternatives were developed in the feasibility study (FS), the lead agency should reference the RI/FS Report.
- ~~Description of Alternatives~~
- ~~Summary of Comparative Analysis of Alternatives~~
- ~~Selected Remedy~~
- ~~Statutory Determinations~~
- Explanation of Significant Changes

3. Responsiveness Summary.

DOC. NO.: ELEJ - 000[illegible]

II. DOCUMENTING INTERIM ACTION DECISIONS

During scoping, or at other points in the RI/FS, the lead agency may determine that an interim remedial action is appropriate.[2] An interim action is limited in scope and only addresses areas/media that will be followed by a final operable unit ROD. Reasons for taking an interim action could include the need to:

- Take quick action to protect human health and the environment from an imminent threat in the short term, while a final remedial solution is being developed; or
- Institute temporary measures to stabilize the site or operable unit and/or prevent further migration or degradation.

Interim actions either are implemented for separate operable units or may be a component of a final ROD. In either case, an interim action must be followed by a final ROD, which should: (1) provide long-term protection of human health and the environment; (2) fully address the principal threats posed by the site or operable unit; and (3) address the statutory preference for treatment that reduces the toxicity, mobility, or volume of wastes. Examples of possible interim actions are provided in Highlight 3.

Interim Actions vs. Early Actions

Interim remedial actions should not be confused with "early remedial actions," which may be either interim or final. For example, an early interim action might include providing a temporary alternate water supply and sealing wells that are pumping from a contaminated aquifer. An early final action might involve the complete removal of drums and a limited amount of surrounding contaminated soil that, without early attention, could result in contamination to currently uncontaminated areas.

Because an interim action may be taken early to mitigate the more immediate threats, there may not be sufficient time to prepare a "formal" RI or "formal" FS report. Although preparation of an RI/FS report is not required for an interim action, for the purpose of fulfilling the NCP's Administrative Record requirements, there must be documentation that supports the rationale for the action. A summation of site data collected during field investigations should be sufficient to document a problem in need of response; in addition, a short analysis of what remedial alternatives were considered, which ones were rejected, and the basis for the evaluation (as is done in a focused FS) should be summarized to support the selected action.

HIGHLIGHT 3
EXAMPLES OF POSSIBLE INTERIM ACTIONS

- Installing extraction wells to pump a ground-water aquifer to restrict migration of a contaminant plume with the intention of later installing additional wells (or taking other action) to address the contamination in a final action.
- Providing a temporary alternate source of drinking water with the intention of later, in a subsequent action, remediating the source of contamination and/or the aquifer.
- Constructing a temporary cap to control or reduce exposures until a subsequent action is taken.
- Relocating contaminated material from one area of a site (e.g., residential yards) to another area of the site for temporary storage until a decision on how best to manage site wastes is made. (Note: This interim action (i.e., for temporary storage) also could contain a final action component if the excavated area will not require further remediation.)

INTERIM ACTION ROD FORMAT[3]

The Interim Action ROD should be tailored to the limited scope and purpose of the interim action.

The format for Interim Action RODs is outlined below.

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose

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[2] A removal action also may be appropriate to address short-term risks at an NPL site. See Interim Guidance on Addressing Immediate Risks at NPL Sites, OSWER Directive 9200.2-03, January 30, 1990.

[3] In some cases, RODs will be prepared that include both interim actions and a final action; such RODs should clearly specify which components of the action are interim and which are final. For any final action components, the ROD should include the information and documentation required for the "standard ROD." For example, where a ROD includes a final source control measure and a temporary alternate water supply, the ROD must provide the documentation required in the "standard format" for the final source control action, as well as addressing, in the streamlined manner discussed above, the rationale and justification for the interim water supply action. In this example, it would be necessary to address the contaminated ground water in a final action ROD at a later time.

- Assessment of the Site

- Description of Selected Remedy

- **Statutory Determinations:** The declaration statement should read as follows:

  This interim action is protective of human health and the environment, complies with (or waives) Federal and State applicable or relevant and appropriate requirements for this limited-scope action, and is cost-effective. This action is interim and is not intended to utilize permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable for this [*interim action/operable unit*]. [*Note: The following sentence should be included, where treatment is part of the interim action: This interim action utilizes treatment and thus is in furtherance of the statutory preference for treatment.*] Because this action does not constitute the final remedy for the [*site/operable unit*], the statutory preference for remedies that employ treatment [*although partially addressed in this remedy*] that reduces toxicity, mobility, or volume as a principal element will be addressed by the final response action. Subsequent actions are planned to address fully the threats posed by the conditions at this [*site/operable unit*]. Because this remedy will result in hazardous substances remaining on site above health-based levels, a review will be conducted within five years after commencement of the remedial action as EPA continues to develop final remedial alternatives for the [*site/operable unit*]. The review will be conducted to ensure that the remedy continues to provide adequate protection of human health and the environment. Because this is an interim action ROD, review of this site and of this remedy will be continuing as part of the development of the final remedy for the [*site/operable unit*].

- Signature and Support Agency Acceptance of the Remedy

2. Decision Summary

- Site Name, Location, and Description

- Site History and Enforcement Activities

- Highlights of Community Participation

- **Scope and Role of Operable Unit:** This section provides the rationale for taking the limited action. To the extent that information is available, the section should detail how the response action fits into the overall site strategy. This section should state that the interim action will be consistent with any planned future actions, to the extent possible.

- **Site Characteristics:** This section should focus on the description of those site or operable unit characteristics to be addressed by the interim remedy.

- **Summary of Site Risks:** This section should focus on risks addressed by the interim action and should provide the rationale for the limited scope of the action. The rationale can be supported by facts that indicate that temporary action is necessary to stabilize the site or portion of the site, prevent further environmental degradation, or achieve significant risk reduction quickly while a final remedial solution is being developed. Qualitative risk information may be presented if quantitative risk information is not yet available, which often will be the case. The more specific findings of the baseline risk assessment should be included in the subsequent final action ROD for the operable unit and the ultimate cleanup objectives (i.e., acceptable exposure levels) for the site or operable unit.

- **Description of Alternatives:** This section should describe the limited alternatives that were considered for the interim action (generally three or fewer). Only those requirements that are applicable or relevant and appropriate requirements (ARARs) to the limited-scope interim action should be incorporated into the description of alternatives.

- **Summary of Comparative Analysis of Alternatives:** The comparative analysis should be presented in light of the limited scope of the action. Evaluation criteria not relevant to the evaluation of interim actions need not be addressed in detail. Rather, their irrelevance to the decision should be noted briefly.

- Selected Remedy

- **Statutory Determinations:** The interim action should protect human health and the environment from the exposure pathway or threat it is addressing and the waste material being managed. The ARARs discussion should focus only on those ARARs specific to the interim action (e.g., residuals management during implementation).[4] The discussion under "utilization of permanent solutions and treatment to the maximum extent practicable" should indicate that the interim action is not designed or expected to be final, but that the selected remedy represents the best balance of

[4] An interim remedy waiver may be appropriate where a requirement that is ARAR cannot be met as part of the interim remedy but will be attained (unless use of one of the other five waivers is justified) by the final site remedy (CERCLA §121(d)(4)(A) and NCP 300.430(f)(1)(ii)(C)(1)).

tradeoffs among alternatives with respect to pertinent criteria, given the limited scope of the action. The discussion under the preference for treatment section should note that the preference will be addressed in the final decision document for the site or final operable unit.

Explanation of Significant Changes

3. Responsiveness Summary.

III. DOCUMENTING CONTINGENCY REMEDIES

The lead agency in consultation with the support agency may decide to incorporate a contingency remedy in the ROD. Use of a contingency ROD may be appropriate when there is significant uncertainty about the ability of remedial options to achieve remediation levels (e.g., cleanup of an aquifer to non-zero MCLGs or MCLs).

For example, a contingency ROD may be appropriate when the performance of an innovative treatment technology (or a demonstrated technology being used on a waste for which performance data are not available) appears to be the most promising option, but additional testing will be needed during remedial design to verify the technology's performance capabilities; in this case, a more "proven approach" could be identified as a contingency remedy. [Note: The use of contingency remedies should be carefully considered. Site managers should perform the necessary steps of treatability studies/ field investigations to evaluate a technology's performance abilities during the RI/FS. More detailed testing at the rational-scale level may be performed during design.]

Where applicable, the ROD should specify under what circumstances the contingency remedy would be implemented, i.e., what are the general criteria (e.g. failure to achieve desired performance levels) that EPA will use to decide to implement the contingency option as opposed to the selected remedy.

CONTINGENCY REMEDY ROD FORMAT

1. Declaration

- Site Name and Location
- Statement of Basis and Purpose
- Assessment of the Site
- Description of the Selected Remedy: Both the selected remedy and the contingency remedy should be described in bullet form.
- **Statutory Determinations:** The Declaration should be modified to indicate that both the selected remedy and the contingency remedy will satisfy the statutory requirements.
- Signature and Support Agency Acceptance of the Remedy

2. Decision Summary

- Site Name, Location, and Description
- Site History and Enforcement Activities
- Highlights of Community Participation
- Scope and Role of Operable Unit or Response Action
- Site Characteristics
- Summary of Site Risks
- **Description of Alternatives:** This section should identify any uncertainties about the use of the technologies being considered, and the extent additional testing is needed. The selected remedy and the contingency remedy must be fully described.
- **Summary of Comparative Analysis:** The selected remedy and the contingency remedy should be evaluated fully against the nine criteria; the uncertainties should be noted, as well as the expectations for performance. Community (and support agency) acceptance of an innovative technology should be discussed in light of the CERCLA provisions in Section 121(b)(2), which takes into account the degree of support for the action by the community.
- **Selected Remedy:** The selected and contingency remedies should be identified. Additional testing/investigations to occur as part of remedial design to further evaluate the selected remedy should be discussed. The criteria that will be used to decide to implement the contingency remedy should be identified.
- **Statutory Determinations:** The statutory determination discussion should document that both remedies fulfill CERCLA Section 121 requirements.
- Explanation of Significant Changes

3. Responsiveness Summary.

NOTICE: The policies set out in this memorandum are intended solely as guidance. They are not intended, nor can they be relied upon, to create any rights enforceable by any party in litigation with the United States. EPA officials may decide to follow the guidance provided in this memorandum, or to act at variance with the guidance, based on an analysis of specific site circumstances. The Agency also reserves the right to change this guidance any time without public notice.

DOC. NO.: CLET-000641-12.04-10/10/91

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OCT 18 1991

OFFICE OF ENFORCEMENT

Thomas Baca
Deputy Assistant Secretary of Defense (Environment)
OASD (P&L)
Washington, D.C. 20301-8000

Re: Department of Defense (DoD) Consultation with EPA

Dear Mr. Baca:

Recently, concerns have been raised within EPA regarding the number of removals DoD may be conducting without prior consultation with EPA. EPA is well aware that the number of response activities, including removal activities, conducted by the DoD has increased dramatically. It is encouraging to see the number of response actions being undertaken in an effort to improve the environment. EPA supports DoD's conducting removal actions where appropriate. Working together, EPA and DoD can help ensure that all removals are done in accordance with applicable laws.

In an attempt to enhance the lines of communication between DoD and EPA and to achieve better cleanups, I have attached to this letter a copy of EPA guidance dated February 28, 1989 entitled "Notice of Environmental Restoration Activities at Department of Defense Facilities." You may be well aware of this document, but I am bringing it to your attention in order to stress how important coordination is to EPA. Based on past experience, I believe that DoD deems coordination to be just as important. Based on this belief, I request that we meet in the near future to discuss coordination of removal actions.

Should you have any concerns or questions, please call me at (302) 260-9801. Thank you in advance for cooperation in this important matter.

Sincerely,

Gordon M. Davidson, Director
Office of Federal Facilities Enforcement

Enclosure

cc: Edward E. Reich
Scott Fulton
William White
Bruce Diamond
Waste Management Division Directors, Regions I-X
Federal Facilities Coordinators, Regions I-X
Lisa Lubick
Lewis D. Walker
Jacqueline Schafer
Gary Vest

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DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND
ROCK ISLAND, ILLINOIS 61299-6000

REPLY TO
ATTENTION OF

AMSMC-SR (415-10a)

04 DEC 1991

MEMORANDUM FOR Commander, Atlantic Division, Naval Facilities Engineering Command, ATTN: 1822(L. Boucher), Norfolk, VA 23511-6287

SUBJECT: Chemical Surety Material Removed From a Dump Site

1. Reference: Letter, LANTNAVFACENGCOM, 19 Nov 91, SAB.

2. Relative to paragraph 3 of the original letter:

a. Paragraph 3a. Yes these are accurate statements.

(1) If DOD intent is to do site characterization in an area that has CSM, then all of the planning; i.e. recovery, transportation, emergency response, public/political notification, permitting for storage and movement, etc., must be approved and in place prior to start of work. This situation is different than a finding by unsuspecting excavation crew which finds CSM by accident in the public domain.

(2) Department of the Army to date, has not ruled on whether CSM which was buried, as an accepted means of disposal, must also be considered hazardous waste. Redstone Arsenal environmentalists have declared some suspect CSM items as hazardous waste. When the declaration was made, USATEU personnel could only package the CSM but could not transport it or take it to a CSM storage site because hazardous waste regulation requires that hazardous waste material being moved/ stored must be characterized.

b. Paragraph 3b. The document which provides that EOD removes items is AR 75-14, Interservice Responsibilities for Explosive Ordnance Disposal, 25 Sep 73. The USATEU has EOD and other assets to deal with chemicals so they are usually the ones to respond.

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SUBJECT: Chemical Surety Material Removed From a Dump Site

c. Paragraph 3c. Yes, IAW AR 50-6 and AR 190-59, CSM can be stored. However, the proper storage conditions are expensive to establish and maintain. They are (in general):

1. Lighted storage area.

2. 24 hour guards, with backup guards.

3. Double fence.

4. Locked storage area.

d. Paragraph 3d. Chemical surety material per se is <u>not</u> a hazardous waste. The only munition that has been <u>declared</u> by the Army as hazardous waste are M55 Rockets. Items found in the ground have also been declared to be hazardous waste at one Army site (Redstone Arsenal see 2.a.(2) above).

e. Paragraph 3e. The regulated storage issue is still under consideration. As superfund time-lines such as the Navy's at MCB Camp Lejeune occur, this will force a resolution.

f. Paragraph 3f. Recently the Army decided to establish a program manager for demilitarization for other than chemical stockpile munitions; i.e., "ash and trash". Exactly how this group will operate has yet to be determined. The Navy situation with an EPA deadline is the same as has been experienced by:

1.	Ogden, UT	Ogden Depot	DERA site
2.	Virgin Islands	Water Island	Formerly Used Defense Site (FUDS)
3.	Mead, NB	Nebraska Ordnance Depot	FUDS

3. The U.S. Army Corps of Engineers, Huntsville Division has been dealing with the EPA on a site by site basis since their mission is oversight of FUDS. U.S. Army Toxic and Hazardous Materials Agency has also been dealing with this issue; example, Ogden, UT.

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4. The attached recent letter from Region III of the EPA suggests a frank discussion between the Army and EPA of the problem and solutions is needed.

5. The point of contact for this action is the undersigned or Mrs. Betty Peterson, AMSMC-SR, DSN 793-3193/4744.

FOR THE COMMANDER:

Encl

CALVIN T. WOODARD
Major, CM
Surety Officer

CF:
AMSMC-DM

Doc No: CLEJ-00069-12.04-12/14/91

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107

NOV 03 1991

Commander,
U. S. Army Armament Munitions and Chemical Command
Rock Island, IL 61299-6000

Dear Sirs:

In anticipation of the promulgation of Subpart K to the National Oil and Hazardous Substances Pollution Contingency Plan ("NCP"), and as a follow-up to the United States Environmental Protection Agency's ("EPA") letter to the Secretary of Defense, attached, EPA Region III is contacting federal agencies, federal facilities and other federal entities ("federal parties") in order to inform those federal parties of their responsibilities regarding consultation with EPA. This letter is in respect to response actions undertaken by federal parties under the auspices of their authorities pursuant to the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("CERCLA").

In EPA Region III, the Office of Superfund in the Hazardous Waste Management Division has the responsibility for implementation of EPA authorities under CERCLA, and the NCP. Specifically, Region III's Superfund Removal Branch has the responsibility of performing CERCLA Emergency, Time Critical and Non-Time Critical Removal activities. As you may be aware, EPA's Region III encompasses five states, Pennsylvania, Maryland, Delaware, Virginia and West Virginia, and the District of Columbia.

Pursuant to Executive Order 12580, the Army has been delegated response authority "with respect to releases or threatened releases where either the release is on or the sole source of the release is from any facility or vessel under the jurisdiction, custody or control of their departments". In addition, the NCP, CERCLA and Section 211 of the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 96-510 ("SARA") (the Defense Environmental Restoration Program (DERP)), require EPA consultation at all federal facility CERCLA responses.

In an attempt to improve the lines of communication between your agency and EPA, this letter outlines those instances during federal facility response activities where EPA contact is required. Included in each "bullet" is the applicable legal citation.

- For all releases of hazardous substances the Army must notify the National Response Center - 40 CFR Section 300.405(b).

Encl 2

DOC NO: 0267-00067-12.04-121471

Working together, EPA and the Army can help ensure that all removals in Region III are done in accordance with all applicable laws. If you have any question or concerns please feel free to contact me or Terry Stilman of my staff at (215) 597-6686. Thank you in advance for your cooperation in this important matter.

Sincerely,

Abraham Ferdas, Associate Director
Superfund Office
Hazardous Waste Management Division

cc: Rick Newsome, Assisstant for Environmental Restoration
Department of the Army