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HAZARDOUS AND SOLID WASTE AMENDMENT PERMIT FOR NS MAYPORT FL
3/25/1988
U S EPA REGION IV



32228-000
09.02.00.0003

U.S. Navy
Mayport Naval Station
Mayport, Florida



Identification Number FL9 170 024 260
Permit Number FL9 170 024 260

Permit

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 USC §6901 *et seq.*, commonly known as RCRA) and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified and to be codified in Title 40 of the Code of Federal Regulations), a permit is issued to U.S. Navy, Mayport Naval Station (hereafter called the Permittee), who operates a hazardous waste facility located in Mayport, Florida latitude 30° 23' 34" North and longitude 81° 25' 06" West.

This Permit, in conjunction with the Hazardous Waste Permit issued by the State of Florida, constitutes the RCRA permit for this facility. The Permittee shall be required to investigate any releases of hazardous waste or hazardous constituents from any solid waste management unit at the Mayport facility regardless of the time at which waste was placed in such unit and to take appropriate corrective action for any such releases. The Permit also requires the Permittee to certify annually that on-site generation of hazardous waste is minimized to the extent practicable.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and applicable regulations contained in 40 CFR Parts 260 through 264, 266, 268, 270, and 124 as specified in the permit and statutory requirements of RCRA, as amended by the Hazardous and Solid Waste Amendments of 1984, P. L. 98-616, (the RCRA) amendments. Nothing in this permit shall preclude the Regional Administrator from reviewing and modifying the permit at any time during its term in accordance with 40 CFR §270.41.

This Permit is based on the assumption that the information and reports submitted to date, and subsequent to issuance of this permit are accurate. Any inaccuracies found in this information may be grounds for termination or modification of this permit in accordance with 40 CFR §270.41, §270.42, and §270.43 and potential enforcement action. The Permittee must inform EPA of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This Permit is effective as of March 25, 1988, and shall remain in effect until March 25, 1993, unless revoked and reissued, or terminated under 40 CFR §§270.41 and .43 or continued in accordance with 40 CFR §270.51(a).

March 25, 1988
Date

Patrick M. Tobin
Director
Waste Management Division



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I.A. EFFECT OF PERMIT

Compliance with this RCRA permit constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA except for those requirements not included in the permit which became effective by statute or which are promulgated under 40 CFR Part 268 restricting placement of hazardous waste in or on the land. Issuance of this permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Section 3013 or Section 7003 of RCRA, Sections 106(a), 104, or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 et seq., commonly known as CERCLA), or any other law providing for protection of public health or the environment.

I.B. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated for cause as specified in 40 CFR §§270.41, 270.42, and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any permit condition.

I.C. SEVERABILITY

The provisions of this permit are severable, as specified in 40 CFR §124.16 and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

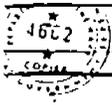
I.D. DUTIES AND REQUIREMENTS

I.D.1. Duty to Comply

The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of RCRA and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

I.D.2. Duty to Reapply

If the Permittee will continue an activity allowed by this permit after the expiration date of this permit, the Permittee shall submit a complete application for a new permit at least 180 days before this permit expires, unless permission for a later date has been granted by the Regional Administrator.



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I.D.3. Permit Expiration

If the State does not have RCRA hazardous waste permitting authority under 40 CFR Part 271 for the 1984 RCRA Amendments, this permit and all conditions herein will remain in effect beyond the permit's expiration date, as specified in 40 CFR §270.51, if the Permittee has submitted a timely, complete application in accordance with 40 CFR §270.10(c) and, through no fault of the Permittee, the Regional Administrator has not issued a new permit with an effective date under 40 CFR §124.15 on or before the expiration date of the previous permit.

If the state does have RCRA hazardous waste permitting authority under 40 CFR Part 271 for the 1984 RCRA Amendments and if the Permittee has submitted a timely and complete application under applicable state law and regulations, the terms and conditions of this permit continue in force beyond the expiration date of the permit, but only until the effective date of the state's issuance or denial of a state RCRA permit.

I.D.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

I.D.5. Duty to Mitigate

In the event of noncompliance with the permit, the Permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

I.D.6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

I.D.7. Duty to Provide Information

The Permittee shall furnish to the Regional Administrator, within a reasonable time, any relevant information which the Regional Administrator may request to determine whether cause exists for



I.D.9.c. Records of monitoring information shall specify:

- I.D.9.c.i. The dates, exact place, and times of sampling, or measurements;
- I.D.9.c.ii. The individuals who performed the sampling or measurements;
- I.D.9.c.iii. The dates analyses were performed;
- I.D.9.c.iv. The individuals who performed the analyses;
- I.D.9.c.v. The analytical techniques or methods used; and
- I.D.9.c.vi. The results of such analyses.

I.D.10. Reporting Planned Changes

The Permittee shall give notice to the Regional Administrator as soon as possible of any planned physical alterations or additions to the permitted facility. This would apply to all contiguous land, structures, other appurtenances and improvements on the land, used for the treatment, storage or disposal of solid waste.

I.D.11. Anticipated Noncompliance

The Permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

I.D.12. Transfer of Permits

This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to 40 CFR §270.41(b)(2) or §270.42(d). Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270, the 1984 RCRA Amendments and this permit.

I.D.13. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

I.D.14. Twenty-four Hour Reporting

I.D.14.a. The Permittee shall report any noncompliance which may endanger human health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. This report shall include:

- I.D.14.a.i. Information concerning the release of any hazardous waste or hazardous constituents which may endanger public drinking water supplies.



I.D.14.a.ii. Information concerning the release or discharge of any hazardous waste or hazardous constituents, or of a fire or explosion at the facility, which could threaten the environment or human health outside the facility.

I.D.14.b. The description of the occurrence and its cause shall include:

I.D.14.b.i. Name, address, and telephone number of the owner or operator;

I.D.14.b.ii. Name, address, and telephone number of the facility;

I.D.14.b.iii. Date, time, and type of incident;

I.D.14.b.iv. Name and quantity of materials involved;

I.D.14.b.v. The extent of injuries, if any;

I.D.14.b.vi. An assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable, and

I.D.14.b.vii. Estimated quantity and disposition of recovered material that resulted from the incident.

I.D.14.c. A written report shall also be provided to the Regional Administrator within 15 days of the time the Permittee becomes aware of the circumstances. The written report shall contain the information specified under Condition I.D.14a. and b.; a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

I.D.15. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time written reports as required by this permit are submitted. The reports shall contain the information listed in Condition I.D.14.b. as appropriate.

I.D.16. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in any document(s) submitted to the Regional Administrator, the Permittee shall promptly submit such facts or information.



I.E. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to the Regional Administrator shall be signed and certified in accordance with 40 CFR §270.11.

I.F. CONFIDENTIAL INFORMATION

The Permittee may claim confidential any information required to be submitted by this permit in accordance with 40 CFR §270.12.

I.G. DEFINITIONS

For purposes of this permit, terms used herein shall have the same meaning as those in RCRA and 40 CFR Parts 124, 260, 261, 264, and 270, unless this permit specifically provides otherwise; where terms are not defined in the regulation, the permit, or EPA guidances or publications, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

- I.G.1. The term "solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).
- I.G.2. A "hazardous constituent" for purposes of this permit are those substances listed in 40 CFR Part 261 Appendix VIII.
- I.G.3. A "solid waste management unit" for the purposes of this permit includes any unit which has been used for the treatment, storage, or disposal of solid waste at any time, irrespective of whether the unit is or ever was intended for the management of solid waste. RCRA regulated hazardous waste management units are also solid waste management units.
- I.G.4. A "unit" for the purposes of this permit includes, but is not limited to, any landfill, surface impoundment, waste pile, land treatment unit, incinerator, injection well, tank, container storage area, septic tank, drain field, wastewater treatment unit, elementary neutralization unit, transfer station, or recycling unit.



- I.G.5. A "release" for purposes of this permit includes any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment of any hazardous waste or hazardous constituents.

- I.G.6. "Contamination" for purposes of this permit refers to the presence of any hazardous constituent in a concentration which exceeds the naturally occurring concentration of that constituent in the immediate vicinity of the facility (in areas not affected by the facility).

- I.G.7. "Corrective action," for purposes of this permit, may include all corrective measures necessary to protect human health and the environment for all releases of hazardous waste or hazardous constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in the unit, as required under 40 CFR §264.101. Corrective measures may address releases to air, soils, surface water or groundwater.



Part II - Solid Waste Management Units

II.A. Applicability

The Conditions of this Part apply to:

- II.A.1. The solid waste management units identified in Appendix B. (See map locations Appendix B).
- II.A.2. Any additional solid waste management units of releases of hazardous waste or hazardous constituents other than those identified in Appendix B, discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means.

II.B. RCRA Facility Assessment (RFA)

- II.B.1. The Permittee shall notify the Regional Administrator of any additional solid waste management unit(s) or releases of hazardous constituents or hazardous waste not identified in Appendix B, or Condition II.A.1. discovered during the course of groundwater monitoring, field investigations, environmental audits or other means within fifteen (15) days of discovery.
- II.B.2. The Permittee shall prepare a RCRA Facility Assessment (RFA) plan and a proposed schedule of implementation and completion for any additional solid waste management unit(s) or release(s) which is discovered subsequent to the issuance of this permit. The plan shall include methods and specific actions as necessary to determine whether a prior or continuing release of hazardous waste or hazardous constituents has occurred at each solid waste management unit. The plan must also include, at a minimum, the following information for each unit:
 - (1) Location of unit(s) on a topographic map of appropriate scale such as required under §270.14(b)(19).
 - (2) Designation of type and function of unit(s).
 - (3) General dimensions, capacities and structural description of unit(s) (supply any available plans/drawings).
 - (4) Dates that the unit(s) was operated.
 - (5) Specification of all wastes that have been managed at/in the unit(s).
 - (6) All available information pertaining to any release of hazardous waste or hazardous constituents from such unit(s) (to include groundwater data, soil analyses, and/or surface water data).
 - (7) Results of sampling and analysis of groundwater, landsurface and subsurface strata, surface water or air requested by the Regional Administrator.



II.C. RCRA Facility Investigation (RFI)

II.C.1. The Permittee shall prepare a RCRA Facility Investigation (RFI) Plan for those units listed in Condition II.A.1. which includes schedules of implementation and completion of specific actions necessary to determine the nature and extent of releases and the potential pathways of contaminant releases to the air, land, surface water, and groundwater. The Permittee must provide sufficient justification and/or documentation that a release is not probable if a media/pathway associated with a unit (groundwater, surface water, soil or air) is not included in the RFI plan. Such deletions of a media or pathway from the RFI are subject to the approval of the Regional Administrator.

II.C.2. The Permittee shall prepare a RCRA Facility Investigation (RFI) Plan for those units identified under Condition II.B. which includes schedules of implementation and completion of specific actions necessary to determine the nature and extent of releases indicated by the assessment, and the potential pathways of contaminant releases to the air, land, surface water, and groundwater. The Permittee must provide sufficient justification and/or documentation that a release is not probable if a unit identified under Condition II.B. or a media/pathway associated with such unit (groundwater, surface water, soil or air) is not included in the RFI plan. Such deletions of a unit, media or pathway from the RFI are subject to the approval of the Regional Administrator.

II.C.3. The RFI Plan shall meet the requirements of Appendix A at a minimum. The RFI shall be conducted in accordance with the approved RFI Plan and Appendix A. The Permittee shall provide written sufficient justification for any omissions or deviations from the minimum requirements of Appendix A. Such omissions or deviations are subject to the approval of the Regional Administrator. The scope of the RFI plan shall include all investigations necessary to ensure compliance with §264.101(c).

II.D. Interim Measures

II.D.1. The Permittee may conduct interim measures to contain, remove or treat contamination resulting from the release of hazardous constituents from a solid waste management Unit in order to protect public health and the environment upon approval by the Regional Administrator. Such interim measures may be conducted concurrently with investigations required under the terms of this permit.

II.D.2. The Permittee shall notify the Regional Administrator of any proposed interim/corrective measures at least thirty (30) days prior to implementation. The notice shall include a description and a schedule of implementation of any proposed interim measures.

II.D.3. The Permittee shall give notice to the Regional Administrator as soon as possible of any planned changes, reduction or additions to the interim measures.

II.D.4. Final approval of interim measures as corrective action required under §264.101 shall be in accordance with 40 CFR §270.41 and

Condition II.E.2 as a permit modification.

II.E. Corrective Action

- II.E.1. The Regional Administrator shall review the final RFI report required under Condition II.F. and notify the Permittee of the need for further investigative actions and/or the need for a corrective action study and/or plan as required under §264.101(a).
- II.E.2. Within ninety (90) days of notification that a corrective action study and/or plan is required, the Permittee shall apply for a permit modification pursuant to §270.41.
- II.E.3. The owner or operator must implement corrective actions beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the Regional Administrator that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such actions. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis.

II.F. Reporting Requirements

II.F.1. RFA Report

The Permittee shall submit a RCRA Facility Assessment Report of the results of the RFA required under Condition II.B. in accordance with the schedule(s) under Condition II.G. The RFA Report must include at a minimum the information listed under Condition II.B.2. and other appropriate information necessary to determine the need for a RFI under Condition II.C.2.

II.F.2. RFI Report

The Permittee shall submit a Draft and Final RCRA Facility Investigation Report. The RFI Reports shall be submitted in accordance with the schedule(s) under Condition II.G.5.

The RFI Report shall include an analysis and summary of all required investigations of solid waste management units and their results. The summary shall include a report on the type and extent of contamination at the facility, including sources and migration pathways, and a description of actual or potential receptors.

The report shall also describe the extent of contamination (qualitative/quantitative) in relation to background levels indicative for the area. The objective of this task shall be to ensure that the investigation data are sufficient in quality (e. g., quality assurance procedures have been followed) and quantity to describe the nature and extent of contamination, potential threat to human health and/or the environment, and to support a Corrective Action Study and/or Plan, if necessary.



II.F.3. Interim Measure Report

Upon completion of Interim Measures conducted under Condition II.D. the Permittee shall submit a report to EPA that contains:

- a. A description of measure(s) implemented;
- b. Summaries of results;
- c. Summaries of all problems encountered;
- d. Summaries of accomplishments and/or effectiveness of interim measure; and
- e. Copies of all relevant laboratory/ monitoring data, etc. in accordance with Condition I.D.9.

II.F.4. Progress Reports

II.F.4.i. RFA/RFI Progress Reports

If the time required to conduct the RFI or RFA is greater than 180 days, the Permittee shall provide the EPA with quarterly progress reports (90 day intervals) beginning ninety (90) days from implementation of the approved plan containing:

- a. A description of the portion of the RFA/RFI completed;
- b. Summaries of findings;
- c. Summaries of all deviations from the approved RFA/RFI Plan during the reporting period;
- d. Summaries of all problems or potential problems encountered during the reporting period;
- e. Projected work for the next reporting period; and
- f. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

II.F.4.ii. Interim Measures Progress Reports

If the time required for completion of an Interim Measure is greater than 180 days, the Permittee shall provide EPA with quarterly progress reports (90 day intervals) beginning ninety (90) days after initiation of the Interim Measure(s). Such reports shall include:

- a. A description of the portion of the Interim Measure completed;
- b. Summaries of all deviations from the Interim Measures Plan during the reporting period;
- c. Summaries of all problems or potential problems encountered during the reporting period;

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d. Projected work for the next reporting period and

e. Copies of laboratory/monitoring data.

II.F.5. Imminent Hazard Reports

II.F.5.i. The Permittee shall report any imminent or existing hazard to public health or the environment from any release of hazardous waste or hazardous constituents from a Solid Waste Management Unit to the Regional Administrator. Any such information shall be reported orally within 24 hours from such time the Permittee becomes aware of the circumstances. This report shall include the information specified under Conditions I.D.14.a. and b.

II.F.5.ii. A written report shall also be provided to the Regional Administrator within fifteen (15) days of the time the Permittee becomes aware of the circumstances. The written report shall contain the information specified under Conditions I.D.14.a. and b.; a description of the release and its cause; the period of the release; whether the release has been stopped; and if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the release.

II.F.6. All reports must be signed and certified in accordance with 40 CFR §270.11.

II.F.7. Three (3) copies of all reports/plans shall be provided by the Permittee to U.S. EPA at the following address:

Mr. James H. Scarbrough, P.E.
Chief, RCRA Branch
Waste Management Division

Environmental Protection Agency
Region IV
345 Courtland Street, N.E.
Atlanta, Georgia 30365

II.G. Schedules of Compliance

II.G.1. The Permittee shall submit the RFA Plan(s) for Solid Waste Management Units or releases discovered after the effective date of this permit required under Condition II.B.2. to the Regional Administrator within sixty (60) days of the notification required under Condition II.B.1.

II.G.2. The Permittee shall submit the RFA Report required under Condition II.F.1. within thirty (30) of completion of the approved RFA Plan.

II.G.3. The Permittee shall submit the RFI Plan required by Condition II.C.1. and the associated documentation to the Regional Administrator within 120 days of the effective date of this permit.

II.G.4. The Permittee shall submit the RFI Plan(s) required under Condition II.C.2. for Solid Waste Management Units or releases discovered after the effective date of this permit within ninety (90) days of submission of the RFA report required under Condition II.F.



- II.G.5. The Permittee shall submit the Draft RFI Report required under Condition II.F. to EPA for review ninety (90) days after completion of the RFI. The Final RFI Report shall be submitted to EPA within thirty (30) days of receipt of EPA comments on the Draft RFI Report.
- II.G.6. All plans and schedules shall be subject to approval by the Regional Administrator prior to implementation. The Permittee shall revise all submittals and schedules as specified by the Regional Administrator.
- II.G.7. The results of all plans and reports shall be submitted in accordance with the approved schedule. Extensions of the due date for submittals may be granted by the Regional Administrator based on the Permittee's demonstration that sufficient justification for the extension exists.
- II.G.8. If the Permittee at any time determines that the RFA or RFI plans required under Conditions II.B. or II.C. no longer satisfy the requirements of §264.101 or this permit for prior or continuing releases of hazardous waste or hazardous constituents from solid waste management units, he must submit an amended plan(s) to the Regional Administrator within ninety (90) days of such determination.

PART III - WASTE MINIMIZATION

WASTE MINIMIZATION CERTIFICATION

The Permittee shall be required to certify no less often than annually that the Permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the Permittee to be economically practicable and the proposed method of treatment, storage or disposal is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

The Permittee shall maintain copies of the certification in the facility operating record as required under 40 CFR §264.73(b)(9).

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Facility Submission Summary

A summary of the planned reporting requirements contained in the RCRA SWMU Permit is presented below:

<u>Facility Submission Requirements</u>	<u>Due Date</u>
RFI Workplan for SWMU(s) identified at time of permit issuance in Condition II.A.1.	120 days after effective date of permit
Progress Reports on RFI (and interim measures as appropriate)	Quarterly, beginning 90 days from implementation of RFI plan*
Draft RFI Report	Ninety (90) days after RFI completion
Final RFI Report	Thirty (30) days after receipt of EPA comments on Draft RFI Report
Corrective Action Plan	Upon notification from R.A.

The above reports must be signed and certified in accordance with 40 CFR §270.11.

*This applies to RFI plans that are for more than 180 days.



I. RFI WORKPLAN REQUIREMENTS

The Permittee shall prepare a RCRA Facility Investigation (RFI) Workplan that meets the requirements of Part II of this document. This Workplan shall also include the development of the following plans, which shall be prepared concurrently:

A. Project Management Plan

The Permittee shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, and personnel. The Project Management Plan will also include a description of qualifications of personnel performing or directing the RFI, including contractor personnel. This plan shall also document the overall management approach to the RCRA Facility Investigation.

B. Sampling and Analysis Plan

The Permittee shall prepare a plan to document all monitoring procedures: sampling, field measures and sample analysis performed during the investigation to characterize the environmental setting, source, and releases of hazardous constituents, so as to ensure that all information and data are valid and properly documented.

1. Sampling/Field Measurements

The sampling section of the Sampling and Analysis Plan shall be in accordance with Characterization of Hazardous Waste Sites A Methods Manual: Volume II. Available Sampling Methods, EPA-600/4-83-040, and at a minimum discuss:

- a. Selecting appropriate sampling locations, depths, etc.;
- b. Obtaining all necessary ancillary data;
- c. Determining conditions under which sampling should be conducted;
- e. Determining which media are to be sampled (e.g., groundwater, soil, sediment, etc.);
- f. Determining which parameters are to be measured and where;
- g. Selecting the frequency of sampling and length of sampling period;
- h. Selecting the types of samples (e.g., composites vs. grabs) and number of samples to be collected.



- i. Documenting field sampling operations and procedures, including;
 - i) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, preservatives, and adsorbing reagents);
 - ii) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;
 - iii) Documentation of specific sample preservation method;
 - iv) Calibration of field instruments;
 - v) Submission of field-biased blanks, where appropriate;
 - vii) Potential interferences present at the facility;
 - iii) Construction materials and techniques, associated with monitoring wells and piezometers;
 - ix) Field equipment listing and sampling containers;
 - x) Sampling order; and
 - xi) Decontamination procedures.
- J. Selecting appropriate sample containers;
- K. Sampling preservation; and
- i. Chain-of-custody, including:
 - i) Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and
 - ii) Pre-prepared sample labels containing all information necessary for effective sample tracking.

2. Sample Analysis

Sample Analysis shall be conducted in accordance with SW-846:
"Test Methods for Evaluating Solid Waste - Physical/Chemical Methods"

The sample analysis section of the Sampling and Analysis Plan shall specify the following:

- a. Chain-of-custody procedures, including:
 - i) Identification of a responsible party to act as sampling custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;



- ii) Provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and
 - iii) Specification of laboratory sample custody procedures for sample handling, storage, and dispersment for analysis.
- b. Sample storage;
- c. Sample preparation methods;
- d. Analytical procedures, including:
- i) Scope and application of the procedure;
 - ii) Sample matrix;
 - iii) Potential interferences;
 - iv) Precision and accuracy of the methodology; and
 - v) Method detection limits.
- e. Calibration procedures and frequency;
- f. Data reduction, validation and reporting;
- g. Internal quality control checks, laboratory performance and systems audits and frequency, including:
- i) Method blank(s);
 - ii) Laboratory control sample(s);
 - iii) Calibration check samples(s);
 - iv) Replicate sample(s);
 - v) Matrix-spiked sample(s);
 - vii) Control charts;
 - viii) Surrogate samples;
 - ix) Zero and span gases; and
 - x) Reagent quality control checks.
- h. Preventive maintenance procedures and schedules;



- i. Corrective action (for laboratory problems) and
- j. Turnaround time.

C. Data Management Plan

The Permittee shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

1. Data Record

The data record shall include the following:

- a. Unique sample or field measurement code;
- b. Sampling or field measurement location and sample or measurement type;
- c. Sampling or field measurement raw data;
- d. Laboratory analysis ID number;
- e. Property or component measured; and
- f. Result of analysis (e.g. concentration).

2. Tabular Displays

The following data shall be presented in tabular displays:

- a. Unsorted (raw) data;
- b. Results for each medium, or for each constituent monitored;
- c. Data reduction for statistical analysis, as appropriate;
- d. Sorting of data by potential stratification factors (e. g., location, soil layer, topography); and
- e. Summary data

3. Graphical Displays

The following data shall be presented in graphical formats (e. g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):

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- a. Display sampling location and sampling grid;
 - b. Indicate boundaries of sampling area, and area where more data are required;
 - c. Display geographical extent of contamination;
 - d. Illustrate changes in concentration in relation to distances from the source, time, depth or other parameters; and
 - e. Indicate features affecting intramedia transport and show potential receptors.

II. RCRA Facility Investigation (RFI) Requirements

RCRA Facility Investigation:

The Permittee shall conduct those investigations necessary to: characterize the facility (Environmental Setting); define the source (Source Characterization); define the degree and extent of release of hazardous constituents (Contamination Characterization); and identify actual or potential receptors.

The investigations should result in data of adequate technical content and quality to support the development and evaluation of the corrective action plan if necessary. The information contained in a RCRA Part B permit application and/or RCRA Section 3019 Exposure Information Report may be referenced as appropriate.

All sampling and analyses shall be conducted in accordance with the Sampling and Analysis Plan. All sampling locations shall be documented in a log and identified on a detailed site map.

A. Environmental Setting

The Permittee shall collect information to supplement and/or verify Part B information on the environmental setting at the facility. The Permittee shall characterize the following as they relate to identified sources, pathways and areas of releases of hazardous constituents from Solid Waste Management Units.

1. Hydrogeology

The Permittee shall conduct a program to evaluate hydrogeologic conditions at the facility. This program shall provide the following information:

- a. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting ground-water flow beneath the facility, including:
 - i) Regional and facility specific stratigraphy: description of strata including strike and dip, identification of stratigraphic contacts:



- ii) Structural geology: description of local and regional structural features (e. g., folding, faulting, tilting, jointing, etc.);
 - iii) Depositional history;
 - iv) Regional and facility specific ground-water flow patterns; and
 - v) Identification and characterization of areas and amounts of recharge and discharge.
- b. An analysis of any topographic features that might influence the ground water flow system.
- c. Based on field data, tests, and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the facility (i. e., the aquifers and any intervening saturated and unsaturated units), including:
- i) Hydraulic conductivity and porosity (total and effective);
 - ii) Lithology, grain size, sorting, degree of cementation;
 - iii) An interpretation of hydraulic interconnections between saturated zones; and
 - iv) The attenuation capacity and mechanisms of the natural earth materials (e. g., ion exchange capacity, organic carbon content, mineral content etc.).
- e. Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source, a representative description of water level or fluid pressure monitoring including:
- i) Water-level contour and/or potentiometric maps;
 - ii) Hydrologic cross sections showing vertical gradients;
 - iii) The flow system, including the vertical and horizontal components of flow; and
 - iv) Any temporal changes in hydraulic gradients, for example, due to tidal or seasonal influences.
- f. A description of manmade influences that may affect the hydrology of the site, identifying:
- i) Local water-supply and production wells with an approximate schedule of pumping; and



- ii) Marmade hydraulic structures (pipelines, french drains, ditches, etc.).

2. Soils

The Permittee shall conduct a program to characterize the soil and rock units above the water table in the vicinity of contaminant release(s). Such characterization may include, but not be limited to, the following types of information as appropriate:

- a. Surface soil distribution;
- b. Soil profile, including ASTM classification of soils;
- c. Transects of soil stratigraphy;
- d. Hydraulic conductivity (saturated and unsaturated);
- e. Relative permeability;
- f. Bulk density;
- g. Porosity;
- h. Soil sorptive capacity;
- i. Cation exchange capacity (CEC);
- j. Soil organic content;
- k. Soil pH;
- l. Particle size distribution;
- m. Depth of water table;
- n. Moisture content;
- o. Effect of stratification on unsaturated flow;
- p. Infiltration;
- q. Evapotranspiration;
- r. Storage capacity;
- s. Vertical flow rate; and
- t. Mineral content.

3. Surface Water and Sediment

The Permittee shall conduct a program to characterize the surface water bodies in the vicinity of the facility. Such characterization may include, but not be limited to, the following activities and information:

- a. Description of the temporal and permanent surface water bodies including:
 - i) For lakes and estuaries: location, elevation, surface area, inflow, outflow, depth, temperature stratification, and volume;
 - ii) For impoundments: location, elevation, surface area, depth, volume, freeboard, and construction and purpose;



- iii) For streams, ditches, and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, flooding tendencies (i. e., 100 year event), discharge point(s), and general contents.
 - iv) Drainage patterns; and
 - v) Evapotranspiration.
- b. Description of the chemistry of the natural surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biological oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients (NH_3 , $\text{NO}_3^-/\text{NO}_2^-$, PO^{-3}), chemical oxygen demand, total organic carbon, specific contaminant concentrations, etc.
- c. Description of sediment characteristics including:
- i) Deposition area;
 - ii) Thickness profile; and
 - iii) Physical and chemical parameters (e. g., grain size, density, organic carbon content, ion exchange capacity, pH, etc.)

4. Air

The Permittee shall provide information characterizing the climate in the vicinity of the facility. Such information may include, but not be limited to:

- a. A description of the following parameters:
- i) Annual and monthly rainfall averages;
 - ii) Monthly temperature averages and extremes;
 - iii) Wind speed and direction;
 - iv) Relative humidity/dew point;
 - v) Atmospheric pressure;
 - vi) Evaporation data;
 - vii) Development of inversions; and
 - viii) Climate extremes that have been known to occur in the vicinity of the facility, including frequency of occurrence. (i. e. Hurricanes)



- b. A description of topographic and manmade features which affect air flow and emission patterns, including:
 - i) Ridges, hills or mountain areas;
 - ii) Canyons or valleys;
 - iii) Surface water bodies (e. g. rivers, lakes, bays, etc.);
 - iv) Buildings.

B. Source Characterization

For those sources from which releases of hazardous constituents have been detected the Permittee shall collect analytic data to completely characterize the wastes and the areas where wastes have been placed, to the degree that is possible without undue safety risks, including: type, quantity; physical form; disposition (containment or nature of deposits); and facility characteristics affecting release (e. g., facility security, and engineering barriers). This shall include quantification of the following specific characteristics, at each source area:

1. Unit/Disposal Area Characteristics:

- a. Location of unit/disposal area;
- b. Type of unit/disposal area;
- c. Design features;
- d. Operating practices (past and present)
- e. Period of operation;
- f. Age of unit/disposal area;
- g. General physical conditions; and
- h. Method used to close the unit/disposal area.

2. Waste Characteristics:

- a. Type of wastes placed in the unit;
 - i) Hazardous classification (e. g., flammable, reactive, corrosive, oxidizing or reducing agent);
 - ii) Quantity; and
 - iii) Chemical composition.
- b. Physical and chemical characteristics such as;
 - i) Physical form (solid, liquid, gas);
 - ii) Physical description (e. g., powder, oily sludge);



- iii) Temperature;
- iv) pH;
- v) General chemical class (e. g., acid, base, solvent);
- vi) Molecular weight;
- vii) Density;
- viii) Boiling point;
- ix) Viscosity;
- x) Solubility in water;
- xi) Cohesiveness of the waste; and
- xii) Vapor pressure.

c. Migration and dispersal characteristics of the waste such as;

- i) Sorption capability;
- ii) Biodegradability, bioconcentration, biotransformation;
- iii) Photodegradation rates;
- iv) Hydrolysis rates; and
- v) Chemical transformations.

The Permittee shall document the procedures used in making the above determinations.

C. Characterization of Releases of Hazardous Constituents

The Permittee shall collect analytical data on groundwater, soils, surface water, sediment, and subsurface gas contamination in the vicinity of the facility in accordance with the sampling and analysis plan as required above. These data shall be sufficient to define the extent, origin, direction, and rate of movement of contamination. Data shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identity of the individuals performing the sampling and analysis. The Permittee shall address the following types of contamination at the facility:



1. Groundwater Contamination

The Permittee shall conduct a groundwater investigation to characterize any plumes of contamination detected at the facility. This investigation shall at a minimum provide the following information:

- a. A description of the horizontal and vertical extent of any plume(s) of hazardous constituents originating from the facility;
- b. The horizontal and vertical direction of contamination movement;
- c. The velocity of contaminant movement;
- d. The horizontal and vertical concentration profiles of hazardous constituents in the plume(s);
- e. An evaluation of factors influencing the plume movement; and
- f. An extrapolation of future contaminant movement.

The Permittee shall document the procedures used in making the above determinations (e. g., well design, well construction, geophysics, modeling, etc.).

2. Soil Contamination

The Permittee shall conduct an investigation to characterize the contamination of the soil and rock units above the saturated zone in the vicinity of any contaminant release. The investigation may include the following information:

- a. A description of the vertical and horizontal extent of contamination;
- b. A description of appropriate contaminant and soil chemical properties within the contaminant source area and plume. This may include contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation;
- c. Specific contaminant concentrations;
- d. The velocity and direction of contamination movement; and
- e. An extrapolation of future contaminant movement.

The Permittee shall document the procedures used in making the above determinations.



3. Surface Water and Sediment Contamination

The Permittee shall conduct a surface water investigation to characterize contamination in surface water bodies resulting from releases of hazardous constituents at the facility.

The investigation may include, but not be limited to, the following information:

- a. A description of the horizontal and vertical extent of any plume(s) originating from the facility, and the extent of contamination in underlying sediments;
- b. The horizontal and vertical direction of contaminant movement;
- c. The contaminant velocity;
- d. An evaluation of the physical, biological and chemical factors influencing contaminant movement;
- e. An extrapolation of future contaminant movement; and
- f. A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, specific contaminant concentrations, etc.

4. Air Contamination

The Permittee shall conduct an investigation to characterize gaseous releases of hazardous constituents into the atmosphere or any structures or buildings. This investigation may provide the following information:

- a. A description of the horizontal and vertical direction and velocity of contaminant movement;
- b. The rate and amount of the release; and
- c. The chemical and physical composition of the contaminants(s) released, including horizontal and vertical concentration profiles.

The Permittee shall document the procedures used in making the above determinations.

D. Potential Receptors

The Permittee shall collect data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical analysis of biological samples and/or data on observable effects in ecosystems may also be obtained as appropriate. The following characteristics shall be identified:



1. Current local uses and planned future uses of groundwater:

- a. Type of use (e. g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial); and
- b. Location of ground water users, to include withdrawal and discharge wells, within one mile of the impacted area.

The above information should also indicate the aquifer or hydrogeologic unit used and/or impacted for each item.

2. Current local uses and planned future uses of surface waters directly impacted by the facility:

- a. Domestic and municipal (e. g., potable and lawn/gardening watering);
- b. Recreational (e. g. swimming, fishing);
- c. Agricultural;
- d. Industrial; and
- e. Environmental (e. g., fish and wildlife propagation).

3. Human use of or access to the facility and adjacent lands, including but not limited to:

- a. Recreation;
- b. Hunting;
- c. Residential;
- d. Commercial; and
- e. Relationship between population locations and prevailing wind direction.

4. A general description of the biota in surface water bodies on, adjacent to, or affected by the facility.

5. A general description of the ecology within and adjacent to the facility.

6. A general demographic profile of the people who use or have access to the facility and adjacent land, including, but not limited to: age; sex; and sensitive subgroups.

7. A description of any known or documented endangered or threatened species near the facility.



APPENDIX B

SOLID WASTE MANAGEMENT UNITS AND LOCATIONS

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EXPLANATION
 — INSTALLATION BOUNDARY
 ▭ DREDGE SPOIL DISPOSAL AREAS
 ▭ SWAMP OR MARSH AREA

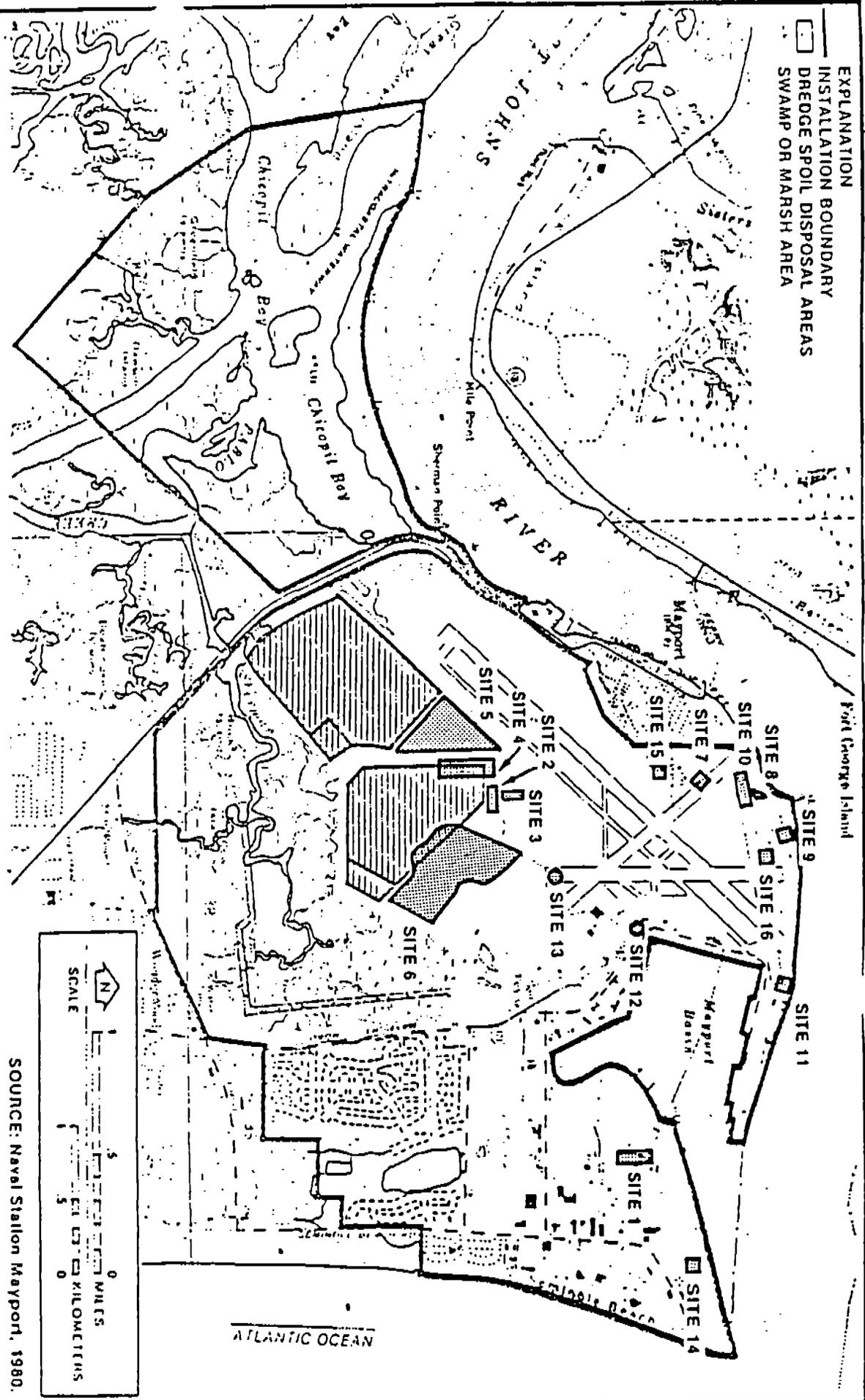
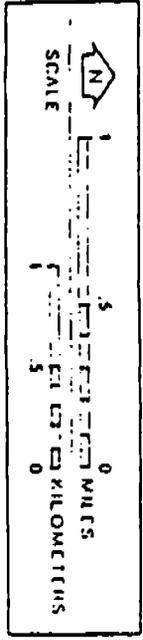


Figure 2-1
 LOCATION OF POTENTIAL CONTAMINATION
 SITES ON NAVAL STATION MAYPORT

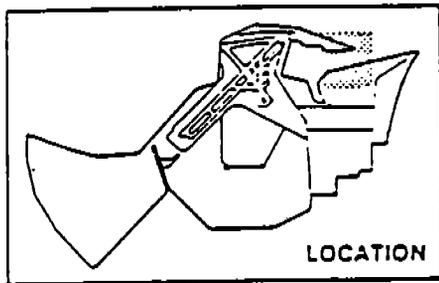
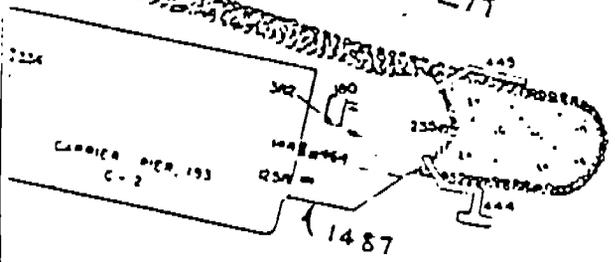
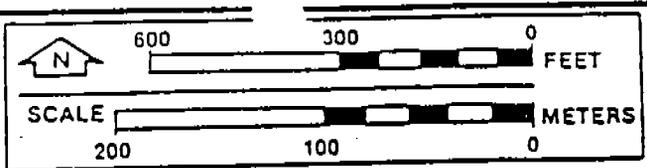


INITIAL ASSESSMENT STUDY
 NAVAL STATION
 MAYPORT, FLORIDA



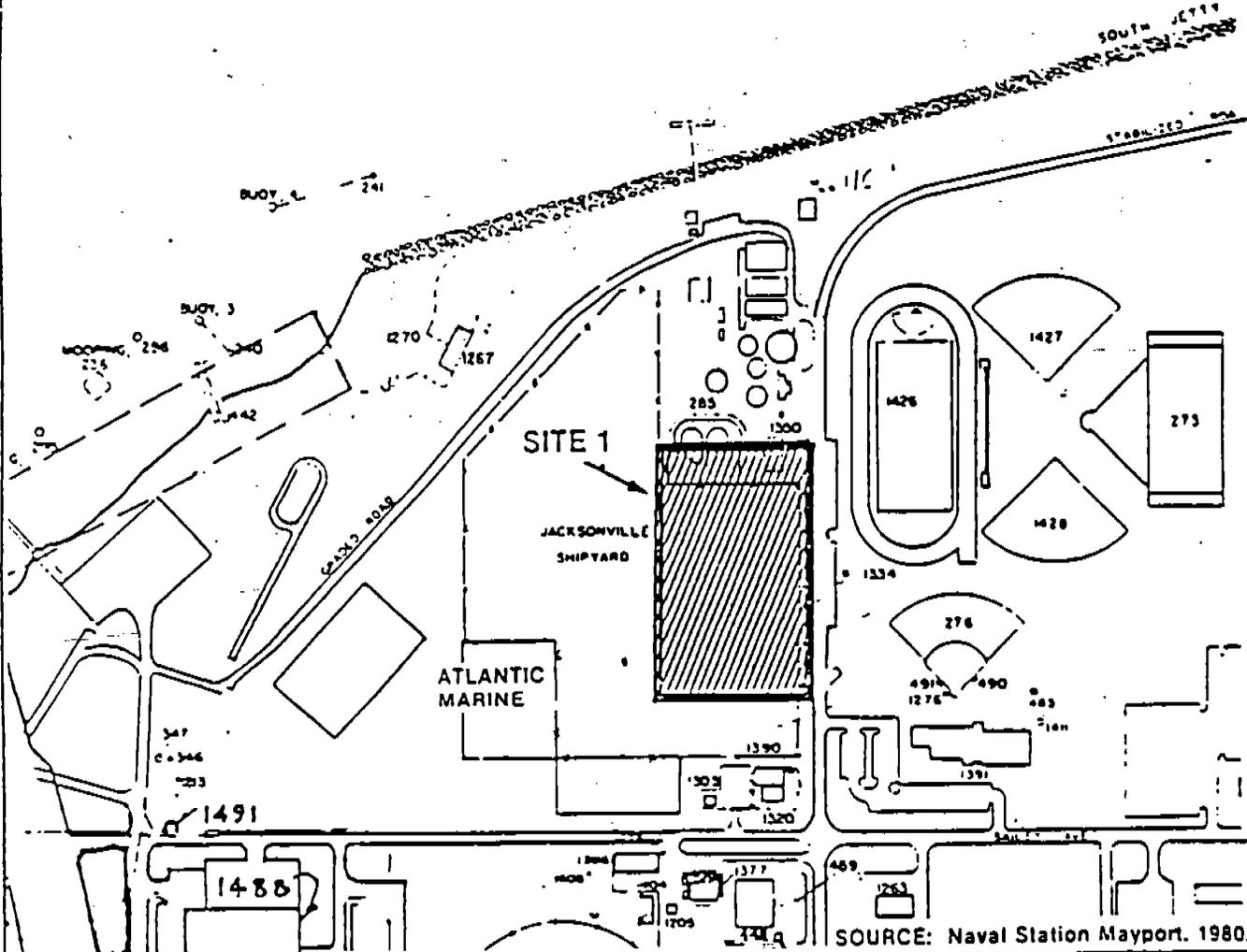
SOURCE: Naval Station Mayport, 1980.

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EXPLANATION
 DISPOSAL SITE
 SEAWALL/JETTY

MAYPORT BASIN

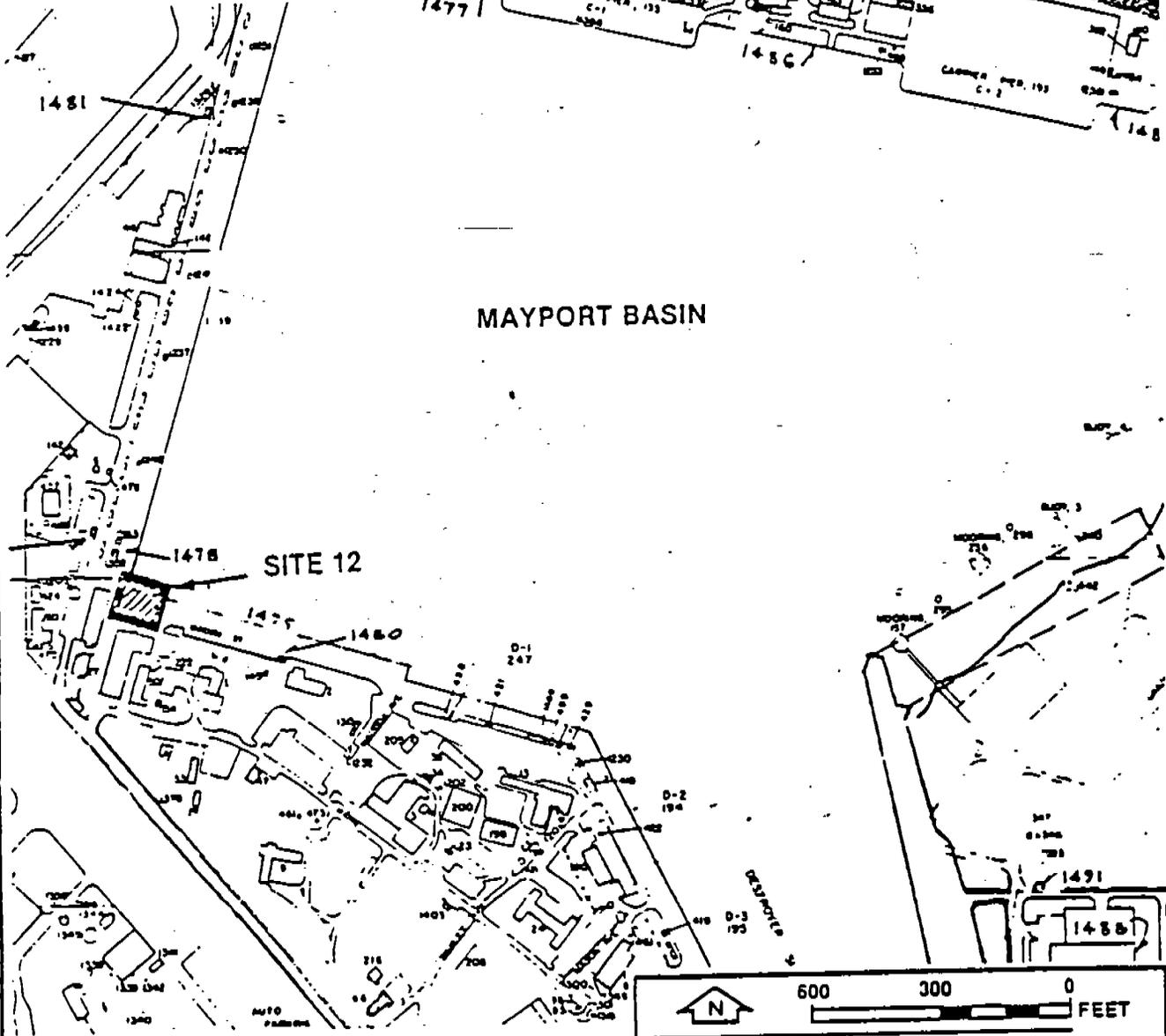
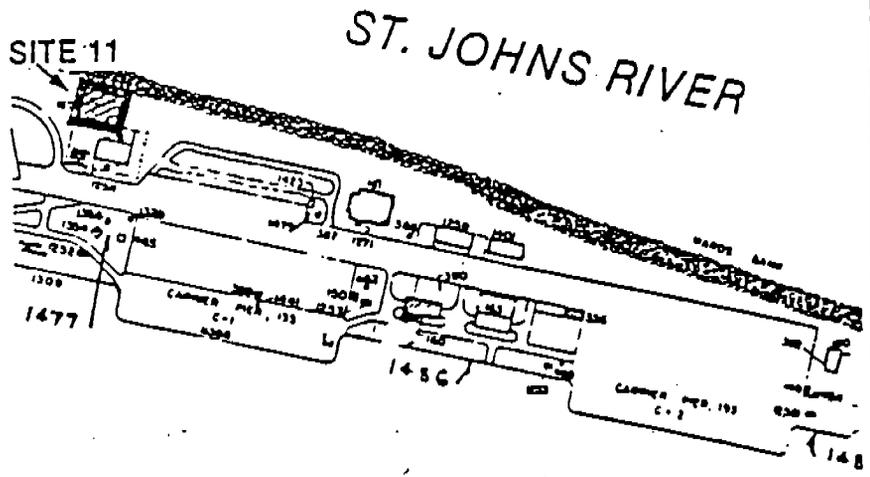
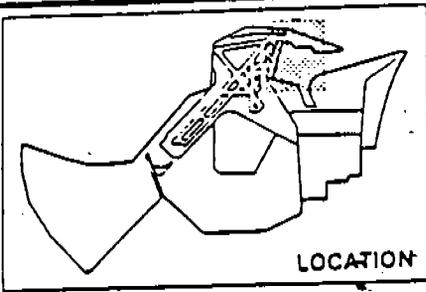


SOURCE: Naval Station Mayport, 1980.

Figure 2-2
 LOCATION AND APPROXIMATE AREAL
 EXTENT OF SITE 1



INITIAL ASSESSMENT STUDY
 NAVAL STATION
 MAYPORT, FLORIDA



EXPLANATION

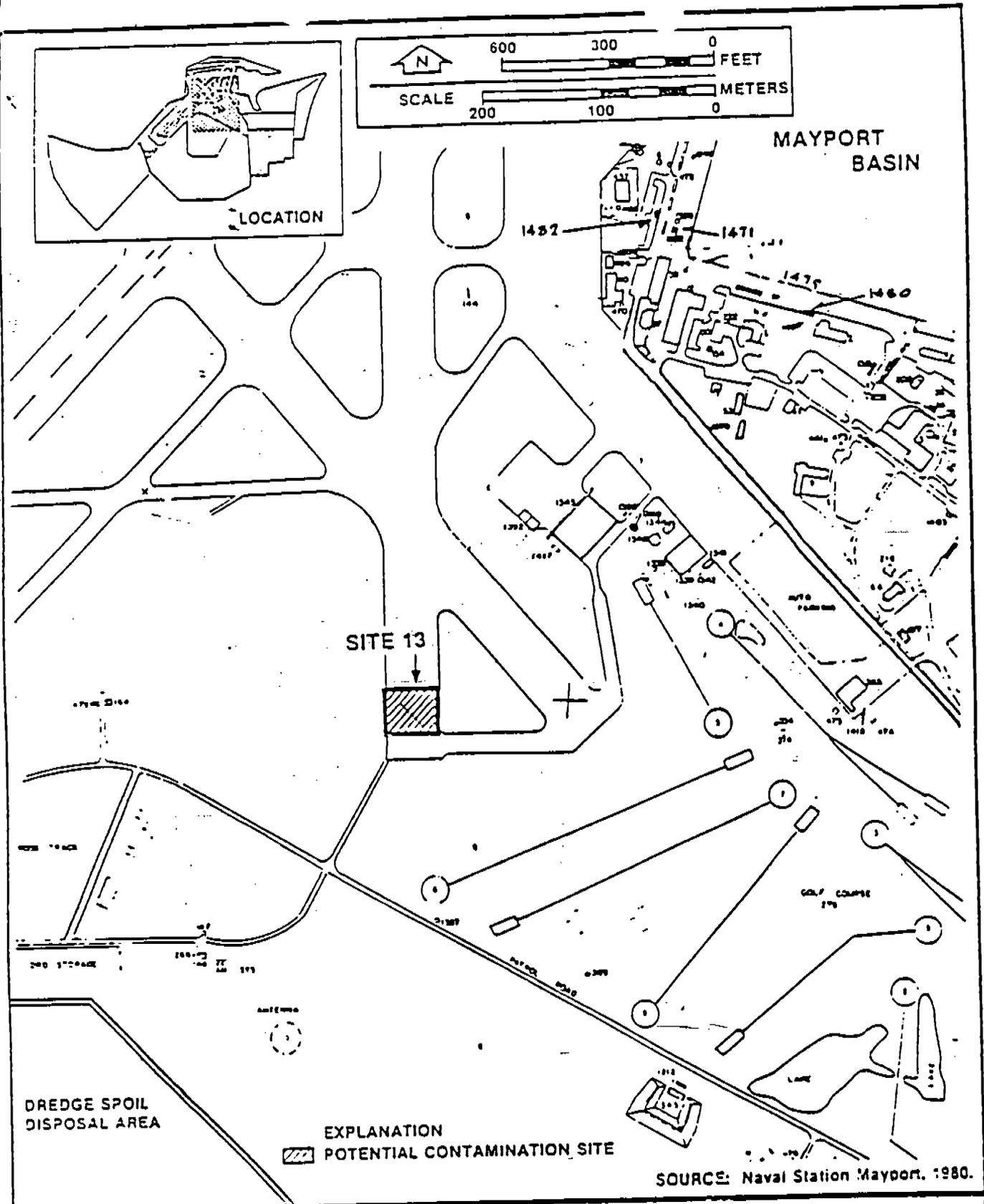
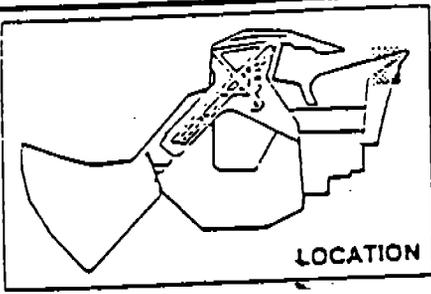


Figure 2-7
LOCATION OF SITE 13



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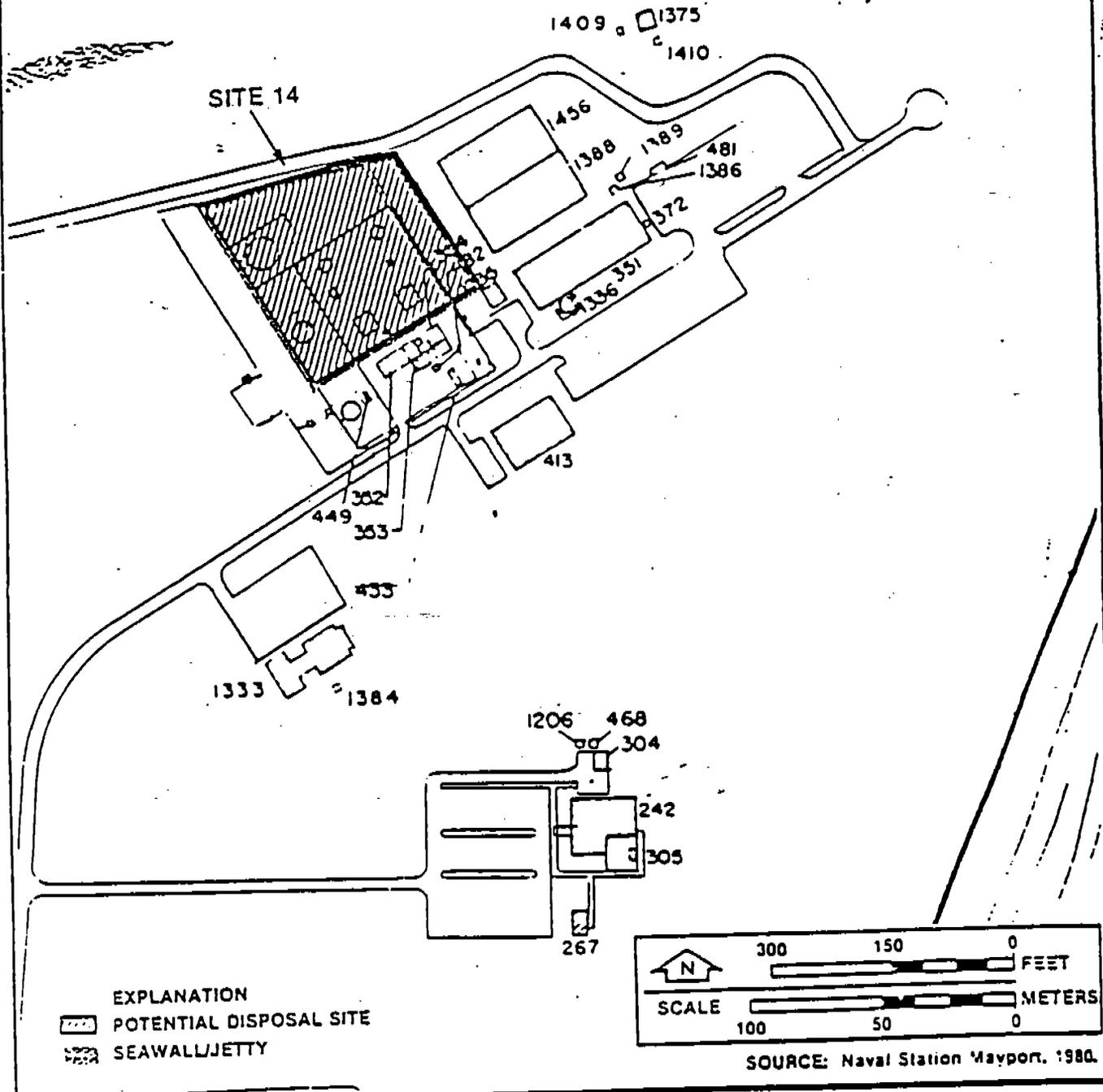


Figure 2-8
LOCATION OF SITE 14



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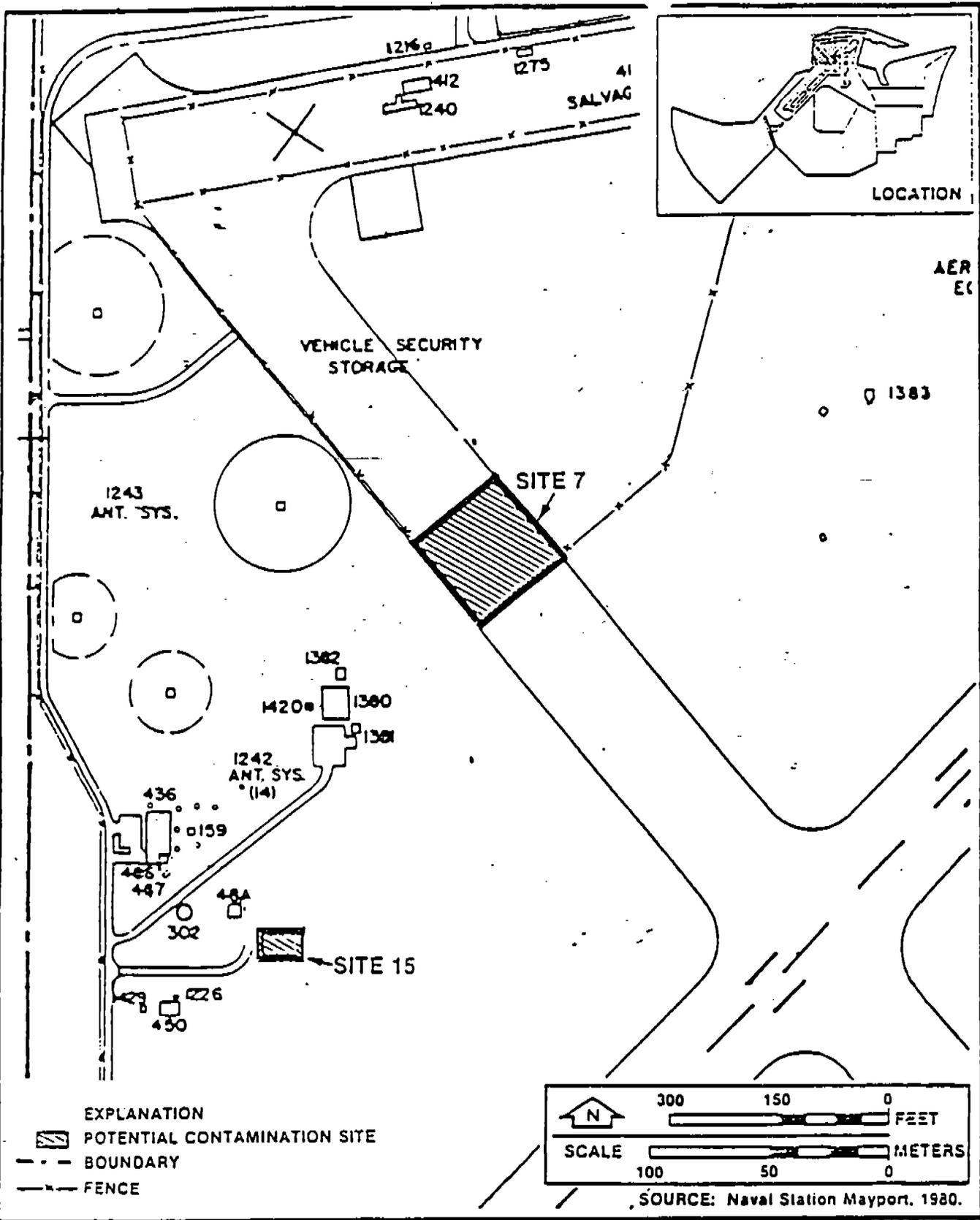


Figure 2-4
 LOCATION OF SITE 7 AND SITE 15



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