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NAS CECIL FIELD, FL
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FINAL HAZARDOUS AND SOLID WASTE AMENDMENTS CORRECTIVE ACTION PERMIT
13526-004-HH WITH TRANSMITTAL LETTER NAS CECIL FIELD FL
2/13/2004
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION



Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

February 13, 2004

CERTIFIED - RETURN RECEIPT

7000 0520 0021 3377 7598

Capt. Paul G. McMahon, Commanding Officer
NAVFAC Southern Division
2155 Eagle Drive
North Charleston, South Carolina 29406

SUBJECT: Naval Air Station Cecil Field
FL5 170 022 474
Corrective Action Permit 13526-004-HH
Duval County

Dear Capt. McMahon:

Enclosed is Permit Number 13526-004-HH for Implementation of Corrective Action Requirements. This permit is being issued pursuant to Section 403.722, Florida Statutes (F.S.), and Chapters 62-4, 62-160, 62-520, 62-522, 62-532, 62-550 and 62-730, Florida Administrative Code (F.A.C.).

This permit is final and effective ("issued") on the date filed with the Clerk of the Department. When the permit is final, any party to the permit has the right to seek judicial review of the permit pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, Department of Environmental Protection, 3900 Commonwealth Boulevard, MS #35, Tallahassee, Florida 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal.

The Notice of Appeal must be filed within thirty (30) days from the date the final permit is issued.

Sincerely,

Tim J. Bahr, Administrator
Hazardous Waste Regulation

TJB/jeg

cc with enclosures:

Narindar Kimar, EPA/Region 4

Ashwin Patel, DEP/Jacksonville

"More Protection, Less Process"

FACT SHEET

February 11, 2004

Facility Name: Naval Air Station Cecil Field
EPA I.D. Number: FL5 170 022 474
Permit Number: 13526-HH-004
Project: HSWA Corrective Action.

1. This permit covers the HSWA corrective action for the SWMUs and AOCs.
2. This Permit incorporates the HSWA requirements following HSWA authorization. Naval Air Station Cecil Field was one of the facilities with HSWA requirements scheduled to be issued in year 2003.
3. There are no issues with the renewal.



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PERMITTEE:

U.S. Department of the Navy
Naval Air Station Cecil Field
NAVFAC Southern Division
2155 Eagle Drive
North Charleston, SC 29406

I.D. NUMBER: FL5 170 022 474

PERMIT/CERTIFICATION NUMBER: 13526-HH-004

PERMIT ISSUE: February 18, 2004

EXPIRATION DATE: Draft (October 30, 2003)

ATTENTION:

Capt. Paul G. McMahon

COUNTY: Duval and Clay

LATITUDE/LONGITUDE: 30°14'42.6"N/81°53'25.23"W

PROJECT: Implementation of Corrective Action
Requirements

Pursuant to the Solid Waste Disposal Act and 40 CFR 264.101 (as adopted in Rule 62-730.180, of the Florida Administrative Code [F.A.C.]), this permit is issued under the provisions of Section 403.722, Florida Statutes (F.S.) and F.A.C. Chapters 62-4, 62-160, 62-522, 62-532, 62-550, and 62-730. The above-named Permittee is hereby authorized to perform the work or operate the facility shown on the application December 3, 2002, and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Facility wide Corrective Action (CA) for the Solid Waste Management Units (SWMUs) and Area of concern (AOCs). The Permittee shall, pursuant to this permit, be required to investigate any releases of hazardous waste or hazardous constituents at the facility, regardless of the time at which waste was placed in a SWMU or AOC, and to take appropriate corrective action which is protective of human health and the environment for any such releases. Corrective Action (CA) is required for SWMUs and AOCs as identified in Appendix A, Section A.1, A.3, A.4 and A.5.

SWMUs and AOCs listed in Appendix A, Section A.2 require No Further Action.

Clean up of SWMUs and AOCs listed in Appendix A, Section A.6 will be governed by Rule 62-770 F.A.C.

SWMUs and AOCs listed in Appendix A, Section A.7, will be removed from the permit because they are not on Navy property.

This permit is based on the premise that information and reports submitted by the Permittee prior to issuance of this permit are accurate. Any inaccuracies found in this information or information submitted as required by this permit may be grounds for termination or modification of this permit in accordance with Rule 62-730.290, F.A.C and potential enforcement action. The Permittee must inform the Department 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.

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Pursuant to 40 CFR 260.10, the requirements of this RCRA permit extend to all contiguous property under the control of the Permittee (Attachment 1 is the property boundaries at issuance of the permit and Attachment 2 is a map which demarks the property boundaries of land under the Permittee's control). 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 become effective by statute, are promulgated under 40 CFR Part 268 restricting placement of hazardous waste in or on the land, or are promulgated under 40 CFR Part 264 regarding leak detection systems for new and replacement surface impoundments, waste piles, and landfill units, and lateral expansions of surface impoundments, waste piles, and landfill units, as specified in 40 CFR 270.4. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Section 3008(a), 3008(h), 3004(v), 3008(c), 3007, 3013 or Section 7003 of RCRA, Sections 104, 106(a), 106(e), 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.

The facility is located at 103rd Street and Normandy Boulevard, Jacksonville, Florida.

The following documents were used in the preparation of this permit:

1. Application for Hazardous Waste Facility Permit Dated December 3, 2002

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Naval Air Station Cecil Field
NAVFAC Southern Division
2155 Eagle Drive
North Charleston, SC 29406

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GENERAL CONDITIONS (PURSUANT TO CHAPTER 62-4, F.A.C.):

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The Permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.
4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
5. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the Permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
6. The Permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the Permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
7. The Permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:
 - a. Have access to and copy any records that must be kept under conditions of the permit;
 - b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
 - c. Sample or monitor any substances or parameters at any location reasonable necessary to assure compliance with this permit or Department rules.

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Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the Permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the Permittee shall immediately provide the Department with the following information:
 - a. A description of and cause of noncompliance; and
 - b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The Permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.
9. In accepting this permit, the Permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is proscribed by Section 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
10. The Permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the Permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.
11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300 F.A.C., as applicable. The Permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
12. This permit or a copy thereof shall be kept at the work site of the permitted activity.
13. This permit also constitutes:
 - a. Determination of Best Available Control Technology (BACT);
 - b. Determination of Prevention of Significant Deterioration (PSD);
 - c. Certification of compliance with state Water Quality Standards (Section 401, PL 92-500); and
 - d. Compliance with New Source Performance Standards.
14. The Permittee shall comply with the following:

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U.S. Department of the Navy
Naval Air Station Cecil Field
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- a. Upon request, the Permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - b. The Permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - c. Records of monitoring information shall include:
 - (1). The date, exact place, and time of sampling or measurements;
 - (2). The person responsible for performing the sampling or measurements;
 - (3). The dates analyses were performed;
 - (4). The person responsible for performing the analyses;
 - (5). The analytical techniques or methods used;
 - (6). The results of such analyses.
15. When requested by the Department, the Permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the Permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.
16. In the case of an underground injection control permit, the following permit conditions also shall apply:
- a. All reports or information required by the Department shall be certified as being true, accurate and complete.
 - b. Reports of compliance or noncompliance with, or any progress reports on, requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.
 - c. Notification of any noncompliance which may endanger health or the environment shall be reported verbally to the Department within 24 hours and again within 72 hours, and a final written report provided within two weeks.
 - (1). The verbal reports shall contain any monitoring or other information which indicate that any contaminant may endanger an underground source of drinking water and any

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noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between underground sources of drinking water.

- (2). The written submission shall contain a description of and a discussion of the cause of the noncompliance and, if it has not been corrected, the anticipated time the noncompliance is expected to continue, the steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance and all information required by Rule 62-528.230(4)(b), F.A.C.
 - d. The Department shall be notified at least 180 days before conversion or abandonment of an injection well, unless abandonment within a lesser period of time is necessary to protect waters of the state.
17. The following conditions also shall apply to a hazardous waste facility permit.
- a. The following reports shall be submitted to the Department by a Permittee that receives hazardous waste from off-site generators:
 - (1). Manifest discrepancy report. If a significant discrepancy in a manifest is discovered, the Permittee shall attempt to rectify the discrepancy. If not resolved within 15 days after the waste is received, the Permittee shall immediately submit a letter report, including a copy of the manifest, to the Department.
 - (2). Unmanifested waste report. The Permittee shall submit an unmanifested waste report to the Department within 15 days of receipt of unmanifested waste.
 - b. A biennial report covering facility activities during the previous calendar year shall be submitted by a Permittee that generates more than 1000 kilograms of hazardous waste in a calendar month. The report is due by March 1 of each even numbered year pursuant to 40 CFR 262.41, as adopted by reference in Chapter 62-730, F.A.C.
 - c. Notification of any noncompliance which may endanger health or the environment, including the release of any hazardous waste that may endanger public drinking water supplies or the occurrence of a fire or explosion from the facility which could threaten the environment or human health outside the facility, shall be reported verbally to the Department within 24 hours, and a written report shall be provided within 5 days. The verbal report shall include the name, address, I.D. number, and telephone number of the facility, its owner or operator, the name and quantity of materials involved, the extent of any injuries, an assessment of actual or potential hazards, and the estimated quantity and disposition of recovered material. The written submission shall contain:
 - (1). A description and cause of the noncompliance.
 - (2). If not corrected, the expected time of correction, and the steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.
 - d. Reports of compliance or noncompliance with, or any progress reports on, requirements in any compliance schedule shall be submitted no later than 14 days after each schedule date.

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- e. All reports or information required by the Department by a hazardous waste Permittee shall be signed by a person authorized to sign a permit application.
- f. Unless expressly provided otherwise, references in this permit to specific Chapters or Rules of the Florida Administrative Code (F.A.C.) and specific parts or sections of 40 Code of Federal Regulations (CFR) shall be construed to include the caveat, "as the Chapter, Rule, part or section may be amended or renumbered from time to time."

SPECIFIC CONDITIONS

PART I - STANDARD REQUIREMENTS

- 1. All submittals in response to these conditions (except Specific Condition 2 of this Part) shall be as follows:
 - a. One (1) copy of all documents required by Specific Conditions Part I only shall be sent to:

Hazardous Waste Supervisor
Department of Environmental Protection
Suite 200B
7825 Baymeadows Way
Jacksonville, Florida 32256-7590
 - b. One (1) copy of all documents required by Specific Conditions Part I only shall be sent to:

Environmental Administrator
Hazardous Waste Regulation Section
M.S. 4560
Bureau of Solid and Hazardous Waste
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
 - c. One (1) copy of all documents required by Specific Conditions HSWA Part I through Appendix E only shall be sent to:

Chief, RCRA Programs Branch
United States Environmental Protection Agency
Region 4
Sam Nunn Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, Georgia 30303-3104
 - d. One copy of all documents required by Specific Conditions HSWA Part I through Appendix E only shall be sent to:

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U.S. Department of the Navy
Naval Air Station Cecil Field
NAVFAC Southern Division
2155 Eagle Drive
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Administrator, Federal Facilities Group
M.S. 4535
Bureau of Waste Cleanup
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

2. All documents submitted pursuant to the conditions of this permit shall be accompanied by a cover letter stating the name and date of the document submitted, the number(s) of the Specific Condition(s) affected, and the permit number and project name of the permit involved. All documents proposing modifications to the approved permit and involving the practice of engineering must be submitted to the Department for review and be signed, sealed, and certified by a Professional Engineer registered, Federal employees may be licensed in any state, in accordance with Chapter 471, F.S. and Rule 62-730.220(7), F.A.C.
3. All submittals incorporating interpretation of geological data shall be signed and sealed by a Professional Geologist, Federal employees may be licensed in any state, in accordance with Chapter 492, F.S. and Rule 62-730.220(8), F.A.C.
4. The Department may modify, revoke, reissue or terminate for cause this permit in accordance with Chapter 62-730, F.A.C. The filing of a request for a permit modification, revocation, 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. The Permittee may submit any subsequent revisions to the Department for approval. These revisions shall meet the requirements of Rule 62-730.290, F.A.C., and the fee requirements of Chapter 62-730 and Rule 62-4.050, F.A.C. The Permittee shall submit a copy of the cover letter accompanying the revisions and the fee to:

Florida Department of Environmental Protection
Post Office Box 3070
Tallahassee, Florida 32315-3070

The Permittee shall submit the revisions to the addresses in Specific Condition 1 of this Part.

5. Prior to one hundred-eighty (180) calendar days before the expiration of this permit (Rule 62-730.260(2), F.A.C.), the Permittee shall submit a complete application for the renewal of the permit on forms and in a manner prescribed by the Department unless postclosure care and all corrective action have been completed and accepted by the Department. If the Permittee allows this permit to expire prior to Department acceptance of the certification of termination of all corrective action, the Permittee must reapply for a permit in accordance with Rule 62-730.900(2), F.A.C. In the event that a change to Chapter 62-730, F.A.C. authorizes a 10-year term for postclosure permits, the term of this Permit shall be automatically extended for five years after the expiration date noted above. The extension shall be effective, without further notice, on the date that the rule change becomes effective.

The Permittee shall submit one copy of the cover letter accompanying the renewal and the fee to:

PERMITTEE:

U.S. Department of the Navy
Naval Air Station Cecil Field
NAVFAC Southern Division
2155 Eagle Drive
North Charleston, SC 29406

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Florida Department of Environmental Protection
Post Office Box 3070
Tallahassee, Florida 32315-3070

The Permittee shall submit the renewal to the addresses in Specific Condition 1 of this Part.

6. The Department of Environmental Protection's 24-hour emergency telephone number is (850)413-9911 or (800)320-0519. During normal business hours, the DEP District Office may be contacted at (904)807-3300.
7. The facility shall comply with those sections of 40 CFR Part 124 specified in Rule 62-730.184, F.A.C., 40 CFR Parts 260 through 268, and 40 CFR Part 270 as adopted in Chapter 62-730, F.A.C. as applicable to Corrective Action authorized by this permit.
8. The Permittee shall revise "Part I - General" of the **Application for a Hazardous Waste Facility Permit** [DEP Form 62-730.900(2)(a)] within thirty (30) days of any changes in the Part I information. The revised "Part I - General" must be submitted to the Department within thirty (30) days of such changes.
9. Before transferring ownership or operation of this facility during the site-wide corrective action period, the Permittee must notify the new owner or operator in writing of the requirements of 40 CFR Part 264 and Chapter 62-730, F.A.C. [40 CFR 264.12(c)]. The Permittee shall comply with Rule 62-730.300, F.A.C.
10. The Permittee will comply with their warning sign policy. The Permittee shall coordinate with appropriate Department representatives or the Partnering Team on sign verbiage, size, placement, site locations, and on other details of sign installation. It is noted here that this policy shall meet the intent of the requirements of Section 403.7255, F.S., and Rule 62-730.181(3), F.A.C.
11. If, at any time, the Permittee or the Department determines that contamination has migrated, or is suspected to have migrated, into any media beyond the facility [40 CFR 260.10] (other than for immediate and short-term emergency response actions), or to other areas within the facility controlled by different operators, the Permittee shall notify the Department within seven calendar days of the initial discovery [Section 403.704(16) F.S., and 40 CFR 270.32(b)(2)]. This notification shall include a proposed notification letter to and a list of known and potentially affected property owners and operators, for Department approval, before the Permittee sends the notification letter to the parties listed below. Within 30 days of Department approval of the notification letter, the Permittee shall notify, by certified or registered mail, at a minimum the following list of people and agencies:
 - a. All property owners onto which the contamination is known or suspected by the Permittee to have migrated;
 - b. All onsite operators within the facility;

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- c. Water Management District(s) with jurisdiction over the geographical area containing the contaminated properties;
- d. City, county or other local environmental agencies jurisdiction over the geographical area containing the contaminated properties; and
- e. EPA Region 4.

In addition, if groundwater contamination has migrated into any media beyond the facility or to other areas within the facility with different operators, the Permittee shall immediately notify the local unit of the Department of Health Bureau of Water Programs in Tallahassee at (850) 245-4240. Copies of the notification letters and proof of receipt must be submitted to the Department within 45 days of the Department's approval of the letter.

- 12. The Maximum Contaminant Levels, Groundwater Protection Standards, Soil Cleanup Goals, Leachability Soil Cleanup Goals and Groundwater Target Cleanup Levels contained in this permit are to be used over the life of this permit, unless otherwise modified by the Department in writing.
- 13. The conditions in this permit shall take precedence over the permit application documents where there are differences between these documents and the permit conditions.
- 14. The Permittee shall give written notice to the Department as soon as possible of any planned physical alterations or additions, including Permittee-initiated Interim Measures (IM) under Condition HSWA IV.2, which impact known or suspected contamination at or from SWMUs or AOCs referenced in Specific Conditions HSWA I.1, HSWA I.6 and HSWA I.7. The notice shall include at a minimum, a summary of the planned change, the reason for the planned change, a discussion of the impact(s) the planned change will have on the ability to investigate contamination at or from the SWMU or AOC, and a discussion of the impact(s) the planned change will have on the known or suspected contamination. For those SWMUs or AOCs with Department approved interim or permanent Land Use Controls (LUCs), the Permittee may utilize the notification criteria and procedures set forth in the LUC Memorandum of Agreement (MOA) executed between the Permittee, the Department and U.S. EPA, for so long as that agreement remains in effect.
- 15. Notification of compliance or noncompliance with any item identified in the compliance schedule in Appendix D shall be submitted according to each schedule date. If the Permittee does not notify the Department within fourteen (14) calendar days of its compliance or noncompliance with the schedule, the Permittee shall be subject to an enforcement action. Submittal of a required item according to the schedule constitutes notification of compliance.
- 16. The Permittee may claim confidential any information required to be submitted by this permit in accordance with Rule 62-730.310, F.A.C.
- 17. The Permittee shall maintain compliance with all schedules given by the Department absent a previously approved extension or national security contingencies. National security contingencies may impact upon the Permittee's ability to comply with a time period in a schedule. National security contingencies may include, but are not limited to, the total or limited denial of entry and egress from the Permittee's facility for indefinite periods of time and the necessity to immediately deploy base

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personnel who are responsible for meeting the requirements of this permit. The Department will consider national security contingencies as a legitimate basis for granting an extension of time periods. Upon the occurrence of national security contingencies requiring actions that impact upon compliance with a time period in a schedule, the Permittee shall notify the Department as soon as possible. The Permittee shall request an extension of time, permit modification or a variance of the permit condition to comply with a time period in a schedule and explain the reason for the request. The Department will review and process such requests within a reasonable time.

HSWA CONDITIONS

HSWA PART I – CORRECTIVE ACTION

1. The Conditions of this Part apply to:
 - a. The solid waste management units (SWMUs) and areas of concern (AOCs) identified in **Appendix A.1**, which require a RCRA Facility Investigation (RFI);
 - b. The SWMUs and AOCs identified in **Appendix A.2**, which require no further action under this permit at this time;
 - c. The SWMUs and AOCs identified in **Appendix A.3**, which require Corrective Measures Implementation (CMI);
 - d. The SWMUs and AOCs identified in **Appendix A.4**, which require confirmatory sampling;
 - e. The SWMUs and AOCs identified in **Appendix A.5**, which require corrective action;
 - f. The SWMUs and AOCs identified in **Appendix A.6**, which is being clean up under 62-770F.A.C.;
 - g. The SWMUs and AOCs identified in **Appendix A.7**, which are NFA, have been transferred, and will be removed from the permit after issuance;
 - h. Any additional SWMUs or AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means; As used in this Part of the permit, the terms "discover", "discovery", or "discovered" refer to the date on which the Permittee either:
 - (1). Visually observes evidence of a new SWMU or AOC;
 - (2). Visually observes evidence of a previously unidentified release of hazardous constituents to the environment; or,
 - (3). Receives information which suggests the presence of a new release of hazardous waste or hazardous constituents to the environment.

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- i. Contamination that has migrated beyond the facility boundary, if applicable. The Permittee shall implement corrective actions beyond the facility boundary where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of the Department that, despite the Permittee's best efforts, as determined by the Department, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee shall use all reasonable efforts, including but not limited to correspondence, telephone calls, personal contacts, drafting and redrafting agreements, and payment of a fee, to obtain any access to real property necessary for work to be performed in the implementation of this permit. If necessary access cannot be obtained by the Permittee, or if obtained, is revoked by owners or entities controlling access to the properties to which access is necessary, the Permittee shall notify the Department within five (5) business days of such refusal or revocation. The Department may at any time thereafter seek to obtain such access as is necessary to implement the terms of this permit. The Department reserves the right to recover from the Permittee reasonable costs incurred by the Department in obtaining site access. The Permittee 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.
2. The Permittee shall notify the Department in writing, within fifteen (15) calendar days of discovery, of any suspected new AOC discovered under Specific Condition 1.h of this Part. The notification shall include, at a minimum, the location of the AOC and all available information pertaining to the nature of the release (*e.g.*, media affected, hazardous constituents released, magnitude of release, *etc.*). The Department may conduct, or require that the Permittee conduct, further assessment (*i.e.*, Confirmatory Sampling) in order to determine the status of the suspected AOC. The Department will notify the Permittee in writing of the final determination as to the status of the suspected AOC. If the Department determines that further investigation of an AOC is required, the permit will be modified in accordance with Rule 62-730.290, F.A.C.
3. The Permittee shall notify the Department in writing, within fifteen (15) calendar days of discovery, of any additional SWMU discovered under Specific Condition 1.h of this Part.
4. Unless otherwise directed or agreed to by the Department, within ninety (90) calendar days after the Permittee notifies the Department of the discovery of any additional SWMU, the Permittee shall prepare and submit to the Department a SWMU Assessment Report (SAR). At a minimum the SAR shall provide the following information:
 - a. Location of SWMU(s) or AOC(s) on a topographic map of appropriate scale such as required under 40 CFR 270.14(b)(19).
 - b. Designation of type and function of SWMU(s) or AOC(s).
 - c. General dimensions, capacities and structural description of SWMU(s) or AOC(s) (supply any available plans/drawings).
 - d. Dates that the SWMU(s) or AOC(s) was operated.

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- e. Specification of all wastes that have been managed at/in the SWMU(s) or AOC(s) to the extent available. Include any available data on hazardous constituents in the wastes.
- f. All available information pertaining to any release of hazardous waste or hazardous constituents from such SWMU(s) or AOC(s) (to include groundwater data, soil analyses, air, and/or surface water data).
5. Based on the results of the SAR, the Department shall determine the need for further investigations at the SWMUs covered in the SAR. If the Department determines that such investigations are needed, the Permittee upon receiving written notification from the Department shall be required to prepare a plan for such investigations as outlined in Specific Conditions **HSWA II.3** or **HSWA III.3**.
6. The Permittee shall notify the Department in writing of any newly discovered release(s) of hazardous waste or hazardous constituents discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, within fifteen (15) calendar days of discovery. Such newly discovered releases may be from SWMUs or AOCs identified in Specific Condition 1.h of this Part or SWMUs or AOCs identified in further investigation under Specific Condition 5 of this Part.
7. If the Department determines that further investigation of the SWMUs or AOCs is needed, the Permittee upon receiving written notification from the Department shall be required to prepare a plan for such investigations as outlined in Specific Condition **HSWA III.3**.

HSWA PART II – CONFIRMATORY SAMPLING (CS)

1. Because confirmatory sampling has already been implemented at many of SWMUs or AOCs identified in Specific Condition HSWA I.1.d, the CS requirements shall be interpreted as follows: If a CS Work Plan has not been submitted for a SWMU or AOC, then Specific Condition 2 or 3 of this Part initiates the CS Requirement. If a CS Work Plan has already been submitted for a SWMU or AOC, then Specific Conditions 4 through 7 of this Part govern implementation of the CS requirements for this SWMU or AOC. If a CS Work Plan has already been submitted and approved for a SWMU or AOC, then Specific Conditions 5 through 7 of this Part govern implementation of the CS requirements for this SWMU or AOC. If the CS Report has already been submitted to the Department for review, then Specific Condition 7 of this Part is applicable for this SWMU or AOC.
2. The Permittee shall prepare and submit a Confirmatory Sampling (CS) Work Plan for each SWMU or AOC identified under Specific Condition HSWA I.1.d. The CS Work Plan shall be submitted according to the schedule of compliance outlined in Appendix D or in accordance with the latest CAMP approved by the Department. The CS Work Plan shall include schedules of implementation and completion of specific actions necessary to determine whether or not a release has occurred. It should also address applicable requirements and affected media. In order to partly or wholly satisfy the CS requirement, the use of data obtained outside of the permit structure may be submitted with the work plan for the Department's review and approval.

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3. Upon notification by the Department, the Permittee shall prepare and submit a Confirmatory Sampling (CS) Work Plan for suspected AOCs per Specific Condition HSWA I.2. or newly identified SWMUs per Specific Condition HSWA I.5. Unless the notification letter specifically establishes a different time frame for work plan submittal, the work plan shall be submitted within one hundred twenty (120) calendar days of notification by the Department that a CS Work Plan is required. The CS Work Plan shall meet the basic requirements listed in Specific Condition 2 of this Part.
4. The CS Work Plan must be approved by the Department, in writing, prior to implementation. This approval may be made in emails, by formal letters, or other alternate reporting or approval processes, as authorized by the Department. The Department shall specify the start date of the CS Work Plan schedule in the letter approving the CS Work Plan. However, the Permittee(s) is free to proceed at its own risk with the actions outlined in the work plan(s) if it has not received a response from FDEP within 45 days of receipt of the work plan(s) by the Department. However, any such action would be at the Permittee's own risk, with the understanding that if the voluntary action does not meet the requirements of the permit, the Permittee is obligated to correct the situation. If the Department disapproves the CS Work Plan, the Department shall either:
 - a. Notify the Permittee in writing of the CS Work Plan's deficiencies and specify a due date for submission of a revised CS Work Plan;
 - b. Revise the CS Work Plan and notify the Permittee of the revisions; or,
 - c. Conditionally approve the CS Work Plan and notify the Permittee of the conditions.
5. The Permittee shall implement the confirmatory sampling in accordance with the approved CS Work Plan.
6. The Permittee shall prepare and submit to the Department in accordance with the schedule in the approved CS Work Plan, a Confirmatory Sampling (CS) Report identifying those SWMUs or AOCs that have released hazardous waste or hazardous constituents into the environment. The CS Report shall include an analysis of the analytical data to support the above determination.
7. Based on the results of the CS Report, the Department shall determine the need for further investigations at the SWMUs or AOCs covered in the CS Report. If the Department determines that such investigations are needed, the Permittee upon receiving written notification from the Department shall be required to prepare a plan for such investigations as outlined in Specific Condition HSWA III.3. The Department will notify the Permittee of any no further action (NFA) decision(s).

HSWA PART III - RCRA FACILITY INVESTIGATION (RFI)

1. Because a RCRA Facility Investigation (RFI) has already been implemented for many of the SWMUs or AOCs identified in Specific Condition HSWA I.1.a, the RFI requirements shall be interpreted as follows: If an RFI Work Plan has not been submitted for a SWMU or AOC, then either Specific Condition 2 or 3 of this Part initiates the RFI Requirement. If an RFI Work Plan has already been submitted, then Specific Conditions 4 through 10 of this Part govern implementation -

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the RFI requirements for this SWMU or AOC. If an RFI Work Plan has already been submitted and approved for a SWMU or AOC, then Specific Conditions 6 through 10 of this Part govern implementation of the RFI requirements for this SWMU or AOC. If the RFI Report for a SWMU or AOC has already been submitted to the Department for review, then Specific Condition 10 of this Part apply.

2. The Permittee shall prepare and submit to the Department a RCRA Facility Investigation (RFI) Work Plan(s) for those SWMUs or AOCs identified in Specific Condition HSWA I.1.a. The RFI Work Plan shall be submitted according to the schedule established in Appendix D. This Work Plan shall be developed to meet the requirements of Specific Condition 4 of this Part.
3. Upon notification by the Department, the Permittee shall prepare and submit to the Department an RFI Work Plan for those SWMUs or AOCs identified under Specific Condition HSWA I.5, HSWA I.7, or HSWA II.7. Unless the notification letter specifically establishes a different time-frame for work plan submittal, the work plan shall be submitted within one hundred eighty (180) calendar days of notification by the Department that an RFI Work Plan is required. The RFI Work Plan(s) shall be developed to meet the requirements of Specific Condition 4 of this Part.
4. The RFI Work Plan(s) shall meet the requirements of Appendix B. The RFI Work Plan(s) shall include schedules of implementation and completion of specific actions necessary to determine the nature and extent of contamination and the potential pathways of contaminant releases to the air, soil, surface water, and groundwater. The Permittee must provide sufficient justification and associated documentation that a release is not probable or has already been characterized if a SWMU or AOC or a media/pathway associated with a SWMU or AOC (groundwater, surface water, soil, subsurface gas, or air) is not included in the RFI Work Plan(s). Such deletions of a SWMU or AOC, media or pathway from the RFI(s) are subject to the approval of the Department. The Permittee shall provide sufficient written justification for any omissions or deviations from the minimum requirements of Appendix B. Such omissions or deviations are subject to the approval of the Department. In addition, the scope of the RFI Work Plan(s) shall include all investigations necessary to ensure compliance with 40 CFR 264.101(c).
5. The RFI Work Plan(s) must be approved by the Department, in writing, prior to implementation. The Department shall specify the start date of the RFI Work Plan schedule in the letter approving the RFI Work Plan(s). However, the Permittee(s) is free to proceed at its own risk with the actions outlined in the RFI Work Plan(s) if it has not received a response from FDEP within 45 days of receipt of the RFI Work Plan(s) by the Department. However, any such action would be at the Permittee's own risk, with the understanding that if the voluntary action does not meet the requirements of the permit, the Permittee is obligated to correct the situation. If the Department disapproves the RFI Work Plan(s), the Department shall either:
 - a. Notify the Permittee in writing of the RFI Work Plan's deficiencies and specify a due date for submission of a revised RFI Work Plan;
 - b. Revise the RFI Work Plan and notify the Permittee of the revisions and the start date of the schedule within the approved RFI Work Plan; or,
 - c. Conditionally approve the RFI Work Plan and notify the Permittee of the conditions.

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6. The Permittee shall implement the RFI(s) in accordance with the approved RFI Work Plan(s) and Appendix B.
7. If the time required to conduct the RFI(s) is greater than one hundred eighty (180) calendar days, the Permittee shall provide the Department with quarterly RFI Progress Reports (90 day intervals) beginning ninety (90) calendar days from the start date specified by the Department in the RFI Work Plan approval letter. The Progress Reports shall contain the following information at a minimum:
 - a. A description of the portion of the RFI completed;
 - b. Summaries of findings (including a summary of the analytical results);
 - c. Summaries of any deviations from the approved RFI Work Plan during the reporting period;
 - d. Summaries of any significant contacts with local community public interest groups or State government;
 - e. Summaries of any problems or potential problems encountered during the reporting period;
 - f. Actions taken to rectify problems;
 - g. Changes in relevant personnel;
 - h. Projected work for the next reporting period, including the forecast of expected field work; and,
 - i. Summaries of significant items found in daily reports, inspection reports, *etc.*

Progress reports and updates provided at the Cecil Field BRAC Cleanup Team meetings shall meet the requirement of this section.

8. The Permittee shall prepare and submit to the Department Draft and Final RCRA Facility Investigation Report(s) for the investigations conducted pursuant to the RFI Work Plan(s) submitted under Specific Condition 1 of this Part. The Draft RFI Report(s) shall be submitted to the Department for review in accordance with the schedule in the approved RFI Work Plan(s). The Final RFI Report(s) shall be submitted to the Department within ninety (90) calendar days of receipt of the Department's final comments on the Draft RFI Report. The RFI Report(s) shall include an analysis and summary of all required investigations of SWMUs and AOCs and their results. The summary shall describe the type and extent of contamination at the facility, including sources and migration pathways, identify all hazardous constituents present in all media, and describe actual or potential receptors. The RFI Report(s) shall also describe the extent of contamination (qualitative/quantitative) in relation to background levels indicative of the area. If the Draft RFI Report is a summary of the initial phase investigatory work, the report shall include a work plan for the final phase investigatory actions required based on the initial findings. Approval of the final phase work plan shall be carried out in accordance with Specific Condition 5 of this Part. 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,

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- potential threat to human health and/or the environment, and to support a Corrective Measures Study, if necessary.
9. The Permittee shall prepare and submit to the Department, along with the Draft and Final RFI Report(s), action levels for each of the hazardous constituents reported in Specific Condition 8 of this Part. Action levels shall be calculated as specified in Appendix E.
 10. The Department will review the RFI Report(s), including the action levels described in Specific Condition 9 of this Part. The Department shall notify the Permittee of the need for further investigative action if necessary and, if appropriate at this moment of the investigation, inform the Permittee, if not already notified, of the need for a Corrective Measures Study to meet the requirements of HSWA Part V and 40 CFR 264.101. The Department will notify the Permittee of any no further action decision. Any further investigative action required by the Department shall be prepared and submitted in accordance with a schedule specified by the Department and approved in accordance with Specific Condition 5 of this Part.

HSWA PART IV – INTERIM MEASURES (IM)

Note: In this Permit, the term Interim Measures (IM) is equivalent to Interim Corrective Measures (ICMs). The IM/ICM can be performed during any phase of work at a site, for example, during the SAR, CS, RFI, CMS or CMI.

1. Because Interim Measures have already been implemented for many of the SWMUs or AOCs identified in Specific Condition HSWA I.1.h, the IM requirements shall be interpreted as follows: If a required IM Work Plan has not been submitted for a SWMU or AOC, then Specific Conditions 2 through 10 of this Part apply. If IM has not been imposed for a SWMU or AOC, then Specific Conditions 3 through 10 of the Part apply. If an IM Work Plan has already been submitted but is unapproved, then Conditions 4 through 10 of the Part control the IM for this SWMU or AOC. If an IM Work Plan has already been submitted and approved for a SWMU or AOC, then Specific Conditions 6 through 10 of this Part govern implementation of the IM requirements for this SWMU or AOC.
2. The Permittee shall prepare and submit an Interim Measures (IM) Work Plan for those SWMUs or AOCs identified in Specific Condition HSWA I.1.h (*i.e.*, those SWMUs or AOCs in Appendix A which are marked as requiring IM). The IM Work Plan shall be submitted according to the schedule outlined in Appendix D. IM are necessary in order to minimize or prevent the further migration of contaminants thereby limiting current and future potential for human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and, if necessary, implemented. The work plan shall include the elements listed in Specific Condition 4 of this Part.
3. Upon notification by the Department, the Permittee shall prepare and submit an Interim Measures (IM) Work Plan for any SWMU or AOC that the Department determines is necessary. Unless the notification letter specifically establishes a different time frame for work plan submittal, the work plan shall be submitted within one hundred twenty (120) calendar days of notification by the Department that an IM Work Plan is required. The work plan shall include the elements listed in

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Specific Condition 4 of this Part. The Permittee may initiate IM by submitting an IM Work Plan for approval and reporting in accordance with the requirements of this Part.

4. The IM Work Plan shall ensure that the interim measures are designed to mitigate any current or potential threat(s) to human health or the environment and is consistent with and integrated into any long-term solution at the facility. The IM Work Plan shall include: the interim measures objectives, procedures for implementation (including any designs, plans, or specifications), and schedules for implementation. Interim measures may be conducted concurrently with investigations required under the terms of this permit.
5. The IM Work Plan must be approved by the Department, in writing, prior to implementation. This approval may be made in emails, by formal letters, or other alternate reporting or approval processes, as authorized by the Department. The Department shall specify the start date of the IM Work Plan schedule in the letter approving the IM Work Plan. However, the Permittee(s) is free to proceed at its own risk with the actions outlined in the work plan(s) if it has not received a response from FDEP within 45 days of receipt of the work plan(s) by the Department. However, any such action would be at the Permittee's own risk, with the understanding that if the voluntary action does not meet the requirements of the permit, the Permittee is obligated to correct the situation. If the Department disapproves the IM Work Plan, the Department shall either:
 - a. Notify the Permittee in writing of the IM Work Plan's deficiencies and specify a due date for submission of a revised IM Work Plan;
 - b. Revise the IM Work Plan and notify the Permittee of the revisions and the start date of the schedule within the approved IM Work Plan; or,
 - c. Conditionally approve the IM Work Plan and notify the Permittee of the conditions.
6. The Permittee shall implement the interim measures in accordance with the approved IM Work Plan.
7. The Permittee shall give notice to the Department as soon as possible of any planned changes, reductions or additions to the IM Work Plan.
8. Final approval of corrective action required under 40 CFR 264.101 which is achieved through interim measures shall be in accordance with 40 CFR 270.41 and HSWA Part VI as a permit modification.
9. If the time required for completion of interim measures is greater than one year, the Permittee shall provide the Department with progress reports at intervals specified in the approved Work Plan. The Progress Reports shall contain the following information at a minimum:
 - a. A description of the portion of the IM completed;
 - b. Summaries of findings;
 - c. Summaries of any deviations from the IM Work Plan during the reporting period;

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- d. Summaries of any problems or potential problems encountered during the reporting period; and,
- e. Projected work for the next reporting period.

Progress reports and updates provided at the Cecil Field BRAC Cleanup Team meetings shall meet the requirement of this section.

10. The Permittee shall prepare and submit to the Department an Interim Measures (IM) Report on the completion of the Interim Measures conducted under this Part. Unless the notification letter specifically establishes a different time frame for report submittal, the report shall be submitted within sixty (60) calendar days of notification by the Department that an IM Report is required. The IM Report shall contain the following information at a minimum:
 - a. A description of interim measures implemented;
 - b. Summaries of results, including as-builts;
 - c. Summaries of all problems encountered;
 - d. Summaries of accomplishments and/or effectiveness of interim measures; and,
 - e. Copies of all relevant laboratory/monitoring data, *etc.*
11. The Permittee may initiate IM at a SWMU or AOC by submitting the appropriate notification pursuant to Specific Condition Part I.14. The Department will process Permittee-initiated IM by either conditionally approving the IM or imposing an IM Work Plan per Specific Condition 1 of this Part. Permittee-initiated IM shall be considered conditionally approved unless the Department specifically imposes an IM Work Plan within thirty (30) calendar days of receipt of notification of the Permittee-initiated IM. The scope and success of Permittee-initiated IM conditionally approved per Specific Condition 11 of this Part (in other words, **this** Specific Condition), shall be subject to subsequent in-depth review; the Department will either comment on or approve the Permittee-initiated IM. Permittee-initiated IM must follow the progress and final reporting requirements in Specific Conditions 9 and 10 of this Part.
12. The Permittee shall give written notice to the Department as soon as possible of any planned physical alterations or additions, including Permittee-initiated Interim Measures (IM) under Condition HSWA IV.2, which impact known or suspected contamination at or from SWMUs or AOCs referenced in Specific Conditions HSWA I.1, HSWA I.6 and HSWA I.7. The notice shall include at a minimum, a summary of the planned change, the reason for the planned change, a discussion of the impact(s) the planned change will have on the ability to investigate contamination at or from the SWMU or AOC, and a discussion of the impact(s) the planned change will have on the known or suspected contamination. For those SWMUs or AOCs with Department approved interim or permanent Land Use Controls (LUCs), the Permittee may utilize the notification criteria and procedures set forth in the LUC Memorandum of Agreement (MOA) executed between the Permittee, the Department and U.S. EPA, for so long as that agreement remains in effect.

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HSWA PART V – CORRECTIVE MEASURES STUDY (CMS)

1. Because a CMS has already been implemented at many of SWMUs or AOCs identified in Specific Condition HSWA I.1.e, the CMS requirements shall be interpreted as follows: If a CMS Work Plan has not been submitted for a SWMU or AOC, then Specific Condition 2 of this Part initiates the CMS requirement. If a CMS Work Plan has already been submitted for a SWMU or AOC, then Specific Conditions 3 through 8 of this Part govern implementation of the CMS requirements for this SWMU or AOC. If a CMS Work Plan has already been submitted and approved for a SWMU or AOC, then Specific Conditions 4 through 8 of this Part govern implementation of the CMS requirements for this SWMU or AOC. If the CMS Report has already been submitted to the Department for review, then Specific Conditions 5 through 8 of this Part are applicable for this SWMU or AOC.
2. The CMS Work Plan shall meet the requirements of Appendix C at a minimum. The CMS Work Plan shall include schedules for implementation and completion of specific actions necessary to complete a CMS. The Permittee must provide sufficient justification and/or documentation for any SWMU or AOC deleted from the CMS Work Plan. Such deletion of a SWMU or AOC is subject to the approval of the Department. The CMS shall be conducted in accordance with the approved CMS Work Plan. The Permittee shall provide sufficient written justification for any omissions or deviations from the minimum requirements of Appendix C. Such omissions or deviations are subject to the approval of the Department. The scope of the CMS Work Plan shall include all investigations necessary to ensure compliance with Chapter 62-730, F.A.C., 40 CFR 264.101, 40 CFR 264.552, and 40 CFR 270.32(b)(2). The Permittee shall implement corrective actions beyond the facility boundary, as set forth in Specific Condition HSWA Part I.1.h.
3. The Department shall either approve or disapprove, in writing, at a Team meeting, or telephone conference the CMS Work Plan. This approval may be made in e-mails, by formal letters, or other alternate reporting or approval processes, as authorized by the Department. However, the Permittee(s) is free to proceed at its own risk with the actions outlined in the work plan(s) if it has not received a response from FDEP within 45 days of receipt of the work plan(s) by FDEP. However, any such action would be at the Permittee's own risk, with the understanding that if the voluntary action does not meet the requirements of the permit, the Permittee is obligated to correct the situation. If the Department disapproves the CMS Work Plan, the Department shall either:
 - a. Notify the Permittee in writing of the CMS Work Plan's deficiencies and specify a due date for submittal of a revised CMS Work Plan;
 - b. Revise the CMS Work Plan and notify the Permittee of the revisions; or
 - c. Conditionally approve the CMS Work Plan and notify the Permittee of the conditions.

This revised CMS Work Plan becomes the approved CMS Work Plan. Any disapproval and subsequent revision of a CMS Work Plan or any requirement for additional evaluation under this paragraph shall be subject to HSWA Part IX.

4. The Permittee shall begin to implement the CMS according to the schedules specified in the CMS Work Plan, no later than fifteen (15) calendar days after the Permittee has received written approval

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from the Department for the CMS Work Plan. Pursuant to Specific Condition 3 of this Part, the CMS shall be conducted in accordance with the approved CMS Work Plan.

5. The Permittee shall prepare and submit to the Department a draft and final CMS Report for the study conducted pursuant to the approved CMS Work Plan and in accordance with Appendix C. The draft CMS Report shall be submitted to the Department in accordance with the schedule in the approved CMS Work Plan. The final CMS Report shall be submitted to the Department within sixty (60) days of receipt of the Department's final comments on the draft CMS Report. The CMS Report shall summarize any bench-scale or pilot tests conducted. The CMS Report must include an evaluation of each remedial alternative. If a remedial alternative requires the use of a Corrective Action Management Unit (CAMU), the CMS report shall include all information necessary to establish and implement the CAMU. The CMS Report shall present all information gathered under the approved CMS Work Plan. The CMS Final Report must contain adequate information to support the Department's decision on the recommended remedy, described under HSWA Part VI.
6. If the Department determines that the CMS Final Report does not fully satisfy the information requirements specified under Specific Condition 6 of this Part, the Department may disapprove the CMS Final Report. If the Department disapproves the CMS Final Report, the Department shall notify the Permittee in writing of deficiencies in the CMS Final Report and specify a due date for submittal of a revised CMS Final Report. The Department will notify the Permittee of any no further action decision. Any disapproval and subsequent revision of a CMS Report or any requirement for additional evaluation under this paragraph shall be subject to HSWA Part IX.
7. As specified under Specific Condition 7 of this Part, based on preliminary results and the CMS Final Report, the Department may require that the Permittee evaluate additional remedies or particular elements of one or more proposed remedies.

HSWA PART VI – REMEDY APPROVAL AND PERMIT MODIFICATION

0. A remedy shall be selected from the remedial alternatives evaluated in the CMS. It will be based at a minimum on protection of human health and the environment, as per specific site conditions and existing regulations. The selected remedy may include any IM implemented to date.
1. Upon the Department's intent to approve the recommendation for a Remedy or Remedies (Specific Condition 1 of this Part), the Permittee shall public notice the Statement of Basis in accordance with Rule 62-730.220(9)(c), F.A.C. This modification will serve to incorporate a final remedy, including a CAMU if necessary, into this permit.
3. The Permittee shall implement the Remedy or Remedies, including Land Use Controls, described in each Statement of Basis. With Department approval, the Permittee may modify these Remedies as long as the modifications continue to ensure integrity and protectiveness of the Remedy selected as specified by the Department.

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HSWA PART VII – MODIFICATION OF THE CORRECTIVE ACTION SCHEDULE OF COMPLIANCE

1. If at any time the Department or the Permittee determines that modification of the Corrective Action Schedule of Compliance is necessary, the permit may be modified to reflect the change(s) to the Schedule of Compliance (Appendix D), with Department approval.
2. Modifications that are initiated and finalized by the Department will be in accordance with the applicable provisions of Chapter 62-730, F.A.C. The Permittee may also request a permit modification in accordance with Rule 62-730.290(3), F.A.C., to change the Schedule of Compliance.
3. If the Department determines that steps or dates in Appendix D may be changed, combined or streamlined without modification of the permit, it may do so with the concurrence of the Permittee following the guidance of the most recent RCRA reforms.
4. The schedule in the CAMP takes precedence over the Schedule of Compliance provided in Appendix D. If at any time the Department determines that a requested update of the CAMP is appropriate, the CAMP schedule shall be updated to reflect the approved changes. Once the Department has approved the update, the updated CAMP schedule shall take precedent over the previous CAMP schedule and the Schedule of Compliance provided in Appendix D.

HSWA PART VIII – WORK PLAN AND REPORT REQUIREMENTS

1. All work plans and schedules shall be subject to approval by the Department prior to implementation to assure that such work plans and schedules are consistent with the requirements of this Permit and with applicable regulations. This approval may be made in emails, by formal letters, or other alternate reporting or approval processes, as authorized by the Department. The Permittee shall revise all submittals and schedules as specified by the Department. Upon approval the Permittee shall implement all work plans and schedules as written. However, the Permittee(s) is free to proceed at its own risk with the actions outlined in the work plan(s) if it has not received a response from FDEP within 45 days of receipt of the work plan(s) by the Department. However, any such action would be at the Permittee's own risk, with the understanding that if the voluntary action does not meet the requirements of the permit, the Permittee is obligated to correct the situation.
2. All work plans and reports shall be submitted in accordance with the approved schedule. Extensions of the due date for submittals may be granted by the Department based on the Permittee's demonstration that sufficient justification for the extension exists.
3. If the Department or the Permittee at any time determines that the SAR information required under HSWA Part I, the CS Work Plan under HSWA Part II, or RFI Work Plan(s) required under HSWA Part III no longer satisfy the requirements of 40 CFR 264.101 or this permit for prior or continuing releases of hazardous waste or hazardous constituents from solid waste management units and/or

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areas of concern, the Permittee shall submit an amended Work Plan(s) to the Department within ninety (90) calendar days of such determination.

4. If the Permittee submits any document to the Department required under this permit for which review and/or approval is necessary and required before the Permittee may proceed under this permit, any and all time necessary for the Department to undertake a thorough and adequate review and/or approval of that document required under this permit will not be counted against the Permittee for future milestone dates in accordance with the latest SMP approved by the Department.
5. **RCRA and CERCLA Interaction:** The main purpose of RCRA corrective action and CERCLA is to ensure that the environmental impacts associated with past and present releases of hazardous constituents, pollutants, or contaminants at or from the facility, including such releases and threats of releases at or from SWMUs and/or AOCs at the facility are investigated and appropriate response action is taken, as necessary to protect the public health, welfare, and the environment. FDEPs position is that these two corrective action programs can defer cleanup activities to the other program with expectation that no further cleanup will be required under the deferring program. Therefore, review of all planning reports and resulting documents, required or submitted under conditions of HSWA Part II (CS), Part III (RFI), Part IV (IM), Part V (CMS), Part VI (Approval and Permit Modification) or Part XIV(CMI) is being deferred to CERCLA. Compliance with the CERCLA cleanup process and requirements will completely satisfy the requirements under conditions HSWA II, III, IV, V, VI and XIV.

HSWA PART IX – APPROVAL/DISAPPROVAL OF SUBMITTALS

1. The Department will review the work plans, reports, schedules, and other documents ("submittals") which require the Department's approval in accordance with the conditions of this permit. The Department will notify the Permittee in writing of any submittal that is disapproved, and the basis therefore.

HSWA PART X – DISPUTE RESOLUTION

1. Any dispute resolution will be conducted in accordance with Chapter 120, F.S. (**Administrative Procedures Act**) and the Department's existing Rules and Procedures. Alternatively, disputes are resolved following a tiered approach with Tier I being staff members, Tier II supervisors, etc.

HSWA PART XI – LAND DISPOSAL RESTRICTIONS

1. 40 CFR Part 268 identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be placed on or in a land treatment, storage or disposal unit. The Permittee shall maintain compliance with the

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requirements of 40 CFR Part 268. Where the Permittee has applied for an extension, waiver or variance under 40 CFR Part 268, the Permittee shall comply with all restrictions on land disposal under this Part once the effective date for the waste has been reached pending final approval of such application.

2. A restricted waste identified in 40 CFR Part 268 Subpart C may not be placed in a land disposal unit without further treatment unless the requirements of 40 CFR Part 268 Subparts C and/or D are met.
3. The storage of hazardous wastes restricted from land disposal under 40 CFR Part 268 is prohibited unless the requirements of 40 CFR Part 268 Subpart E are met.

HSWA PART XII – DEFINITIONS

1. 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 guidelines 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.
 - a. "Action Levels" for the purposes of this permit are the Department's risk-based concentrations of hazardous constituents determined to be indicators for the protection of human health and/or the environment.
 - b. The term "area of concern" (AOC) for purposes of this permit includes any area having a probable release of a hazardous waste or hazardous constituent which is not from a solid waste management unit and is determined by the Department to pose a current or potential threat to human health or the environment. Such areas of concern may require investigations and remedial action as required under RCRA Section 3005(c)(3) and 40 CFR 270.32(b)(2) in order to ensure adequate protection of human health and the environment.
 - c. "Corrective Action Management Unit" (CAMU) means an area within a facility that is used only for managing remediation wastes for implementing corrective action or cleanup at the facility (40 CFR Part 264 Subpart S).
 - d. "Corrective measures" for purposes of this permit, include all corrective action 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.
 - e. "Extent of contamination" for the purposes of this permit is defined as the horizontal and vertical area in which the concentrations of hazardous constituents in the environmental media being investigated are above detection limits or background concentrations indicative of the region, whichever is appropriate as determined by the Department.

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- f. "Facility" for the purposes of this permit includes all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combination of them). For the purposes of implementing corrective action under 264.101, a facility includes all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA).
- g. "Hazardous constituent" for purposes of this permit are those substances listed in 40 CFR Part 261 Appendix VIII and Part 264 Appendix IX.
- h. "Interim Measures" (IM) for purposes of this permit are actions necessary to minimize or prevent the further migration of contaminants and limit actual or potential human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and, if necessary, implemented.
- i. "Land Disposal" for purposes of this permit and 40 CFR Part 268 means placement in or on the land except for a CAMU or staging pile and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, underground mine or cave, or concrete vault or bunker intended for disposal purposes.
- j. 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.
- k. "Remediation waste" for the purposes of this permit includes all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing cleanup.
- l. "Corrective Action Management Plan (CAMP)" for the purposes of this permit is a schedule outlining due dates for submittal of work plans or reports.
- m. "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 by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat.923).
- n. A "solid waste management unit" (SWMU) 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. SWMUs include areas that have been contaminated by routine and systematic releases of hazardous waste or

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- hazardous constituents, excluding one-time accidental spills that are immediately remediated and cannot be linked to solid waste management activities (*e.g.*, product or process spills).
- o. A "Temporary Unit" (TU) for the purposes of this permit includes any temporary tanks and/or container storage areas used solely for treatment or storage of hazardous remediation wastes during specific remediation activities. Designated by the Department, such units must conform to specific standards, and may only be in operation for a period of time as specified in this permit.
 - p. 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.
 - q. "Land Use Control" (LUC) for the purposes of this permit, in regard to real property on federal facilities, should be broadly interpreted to mean any restriction or control, arising from the need to protect human health and the environment, that limits use of and/or exposure to any portion of that property, including water resources. This term encompasses "institutional controls," such as those involving real estate interests, governmental permitting, zoning, public advisories, deed notices, and other "legal" restrictions. The term may also include restrictions on access, whether achieved by means of engineered barriers such as a fence or concrete pad, or by "human" means, such as the presence of security guards. Additionally, the term may involve both affirmative measures to achieve the desired restriction (*e.g.*, night lighting or an area) and prohibitive directives (no drilling of drinking water wells). Considered altogether, the "LUCs" for a facility, in conjunction with the base master plan, will provide a blueprint for how its property should be used in order to maintain the level of protectiveness which one or more remedial/corrective actions were designed to achieve.
 - r. "LUC Implementation Plan" (LUCIP) for the purposes of this permit, refers to a written plan, normally developed after a decision document has required one or more LUCs for some particular area (operable unit, contaminated unit, and/or solid waste management unit) which: 1) identifies each LUC objective for that area (*e.g.*, to restrict public access to the area for recreational use); and 2) specifies those actions required to achieve each identified objective (*e.g.*, install/maintain a fence, post warning signs, record notice in deed records). LUC Implementation Policy Plans specify what must be done to impose and maintain the required LUCs, and are therefore analogous to design and/or operation and maintenance plans developed for active remedies.

HSWA PART XIII – SELECTED REMEDY AT NAVAL AIR STATION CECIL FIELD'S SWMUS

1. Final Remedy selection for Naval Air Station Cecil Field SWMU's are listed below and as described by the Statements of Basis and approved by the Department. Additional components of the chosen remedy are listed below.

SWMUs 1 & 2 (OU 1):

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The selected remedy for SWMUs 1 and 2 includes landfill closure, natural attenuation of the groundwater contaminant plume, land use controls (LUCs), groundwater monitoring, and biomonitoring of Rowell Creek and tributary streams.

Landfill closure consists of removal of surface debris, landfill gas survey, unexploded ordnance survey, and radiological survey. Natural attenuation of the groundwater contaminant plume consists of letting naturally-occurring processes such as biodegradation, dispersion, dilution, and adsorption decrease concentrations of chemicals of concern (COCs) to their cleanup goals. LUCs consist of prohibition of groundwater and surface water use and soil and wetland disturbance. Regular site inspections are performed to verify continued implementation of these LUCs. Groundwater monitoring consists of long-term sampling and analysis of groundwater for quality to evaluate the progress of remediation and verify that COCs are not migrating. Biomonitoring of Rowell Creek and tributary streams consists of sampling and analysis of surface water and sediment for quality and toxicity. Additional information about the remedy selected for SWMUs 1 and 2 can be found in the Operable Unit (OU) 1 Record of Decision (ROD) [ABB Environmental Services, Inc. (ABB-ES), 1995a].

Site reviews are performed every 5 years to verify the continued adequacy of the selected remedy. If results from monitoring or any of the five-year reviews indicate that the selected remedy is no longer protective of human health and the environment, contingency remedies will be evaluated and may be implemented.

SWMU 3 (OU 8)

The selected remedy for SWMU 3 includes in-situ treatment of the groundwater contamination source area, natural attenuation of the downgradient groundwater contaminant plume, LUCs, and groundwater monitoring.

In-situ treatment of groundwater contamination source area consists of installing and operating an air sparging (AS) system to volatilize and aerobically biodegrade groundwater COCs. Natural attenuation of the downgradient groundwater contaminant plume consists of letting naturally-occurring processes such as biodegradation, dispersion, dilution, and adsorption decrease concentrations of COCs to their cleanup goals. LUCs consist of prohibition of groundwater use for drinking purpose until the cleanup goals are met. Regular site inspections are performed to verify continued implementation of these LUCs. Groundwater monitoring consists of long-term sampling and analysis of groundwater for quality to evaluate the progress of remediation and verify that COCs are not migrating. Additional information about the remedy selected for SWMU 3 can be found in the ROD [Tetra Tech NUS, Inc. (TtNUS), 1998a].

Site reviews are performed every 5 years to verify the continued adequacy of the selected remedy. If results from monitoring or any of the five-year reviews indicate that the selected remedy is no longer protective of human health and the environment, contingency remedies will be evaluated and may be implemented.

SWMU 5 (OU 2):

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The selected remedy for SWMU 5 includes removal of the contaminated soil source areas, natural attenuation of the groundwater contaminant plume, LUCs, and groundwater monitoring.

Removal of the of the contaminated soil source areas included the excavation and onsite biological treatment of approximately 5,000 cubic yards of contaminated soil in 1995 and 1996 and the excavation and offsite disposal of approximately 2,600 cubic of contaminated soil and sediment in 1998. Natural attenuation of the groundwater contaminant plume consists of letting naturally-occurring processes such as biodegradation, dispersion, dilution, and adsorption decrease concentrations of COCs to their cleanup goals. LUCs consist of restricting site use to commercial, industrial, and recreational and prohibiting soil excavation. Residential site development is allowable only if subsurface soil is not exposed. LUCs also consist of prohibition of groundwater use for any purpose until the cleanup goals are met. Regular site inspections are performed to verify continued implementation of these LUCs. Groundwater monitoring consists of long-term sampling and analysis of groundwater for quality to evaluate the progress of remediation and verify that COCs are not migrating. Additional information about the remedy selected for SWMU 5 can be found in the OU 2 ROD (ABB-ES, 1995b) and the amended ROD for SWMU 5 (TtNUS, 2000).

Site reviews are performed every 5 years to verify the continued adequacy of the selected remedy. If results from monitoring or any of the five-year reviews indicate that the selected remedy is no longer protective of human health and the environment, contingency remedies will be evaluated and may be implemented.

SWMU 7 (OU 3):

The selected remedy for SWMU 7 includes removal of the contaminated soil source area, natural attenuation of the groundwater contaminant plume, LUCs, and groundwater monitoring.

Removal of the of the contaminated soil source area included the excavation and offsite disposal of approximately 5,000 cubic yards of contaminated soil in December 1998. Natural attenuation of the groundwater contaminant plume consists of letting naturally-occurring processes such as biodegradation, dispersion, dilution, and adsorption decrease concentrations of COCs to their cleanup goals. LUCs consist of prohibition of groundwater use for drinking purpose until the cleanup goals are met. Regular site inspections are performed to verify continued implementation of these LUCs. Groundwater monitoring consists of long-term sampling and analysis of groundwater for quality to evaluate the progress of remediation and verify that COCs are not migrating. Additional information about the remedy selected for SWMU 7 can be found in the ROD [Harding Lawson Associates (HLA), 1999a].

Site reviews are performed every 5 years to verify the continued adequacy of the selected remedy. If results from monitoring or any of the five-year reviews indicate that the selected remedy is no longer protective of human health and the environment, contingency remedies will be evaluated and may be implemented.

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SWMU 8 (OU 3):

The selected remedy for SWMU 8 includes natural attenuation of the groundwater contaminant plume, LUCs, and groundwater monitoring.

Natural attenuation of the groundwater contaminant plume consists of letting naturally-occurring processes such as biodegradation, dispersion, dilution, and adsorption decrease concentrations of COCs to their cleanup goals. LUCs consist of prohibition of groundwater use for drinking purpose until the cleanup goals are met. Regular site inspections are performed to verify continued implementation of these LUCs. Groundwater monitoring consists of long-term sampling and analysis of groundwater for quality to evaluate the progress of remediation and verify that COCs are not migrating. Additional information about the remedy selected for SWMU 8 can be found in the ROD (HLA, 1999b).

Site reviews are performed every 5 years to verify the continued adequacy of the selected remedy. If results from monitoring or any of the five-year reviews indicate that the selected remedy is no longer protective of human health and the environment, contingency remedies will be evaluated and may be implemented.

SWMU 11 (OU 6):

The selected remedy for SWMU 11 includes removal of the contaminated soil source areas, natural attenuation of the groundwater contaminant plume, LUCs, and groundwater monitoring.

Removal of the of the contaminated soil source areas included the excavation and offsite disposal of a total of approximately 540 cubic yards of contaminated soil in 1995 (310 cubic yards), 1998 (200 cubic yards), and January 2000 (30 cubic yards). Natural attenuation of the groundwater contaminant plume consists of letting naturally-occurring processes such as biodegradation, dispersion, dilution, and adsorption decrease concentrations of COCs to their cleanup goals. LUCs consist of prohibition of groundwater use for drinking purpose until the cleanup goals are met. Regular site inspections are performed to verify continued implementation of these LUCs. Monitoring consists of long-term sampling and analysis of groundwater for quality to evaluate the progress of remediation and verify that COCs are not migrating. Additional information about the remedy selected for SWMU 11 can be found in the ROD (TtNUS, 1998b).

Site reviews are performed every 5 years to verify the continued adequacy of the selected remedy. If results from monitoring or any of the five-year reviews indicate that the selected remedy is no longer protective of human health and the environment, contingency remedies will be evaluated and may be implemented.

SWMU 16 (OU 7):

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The selected remedy for SWMU 16 includes sewers repair, in-situ treatment of the groundwater contamination source area, natural attenuation of the downgradient groundwater contaminant plume, LUCs, and groundwater monitoring.

Sewer repairs included the sleeving of a section of storm sewer in 1999 to prevent contaminated groundwater infiltration and migration to surface water. In-situ treatment of groundwater contamination source area consists of installing and operating an AS and soil vapor extraction (SVE) system to volatilize and aerobically biodegrade groundwater COCs. Natural attenuation of the downgradient groundwater contaminant plume consists of letting naturally-occurring processes such as biodegradation, dispersion, dilution, and adsorption decrease concentrations of COCs to their cleanup goals. LUCs consist of prohibition of groundwater use for drinking purpose until the cleanup goals are met. Regular site inspections are performed to verify continued implementation of these LUCs. Groundwater monitoring consists of long-term sampling and analysis of groundwater for quality to evaluate the progress of remediation and verify that COCs are not migrating. Additional information about the remedy selected for SWMU 16 can be found in the amended ROD (TtNUS, 1999).

Site reviews are performed every 5 years to verify the continued adequacy of the selected remedy. If results from monitoring or any of the five-year reviews indicate that the selected remedy is no longer protective of human health and the environment, contingency remedies will be evaluated and may be implemented.

SWMU 17 (OU 2):

The selected remedy for SWMU 17 includes removal of the contaminated soil source area, natural attenuation of the groundwater contaminant plume, LUCs, and groundwater monitoring.

Removal of the of the contaminated soil source area included the excavation and onsite thermal treatment of approximately 6,600 cubic yards of contaminated soil in 1995. Natural attenuation of the groundwater contaminant plume consists of letting naturally-occurring processes such as biodegradation, dispersion, dilution, and adsorption decrease concentrations of COCs to their cleanup goals. LUCs consist of prohibition of groundwater use for drinking purpose until the cleanup goals are met. Regular site inspections are performed to verify continued implementation of these LUCs. Groundwater monitoring consists of long-term sampling and analysis of groundwater for quality to evaluate the progress of remediation and verify that COCs are not migrating. Additional information about the remedy selected for SWMU 17 can be found in the OU 2 ROD (ABB-ES, 1995).

Site reviews are performed every 5 years to verify the continued adequacy of the selected remedy. If results from monitoring or any of the five-year reviews indicate that the selected remedy is no longer protective of human health and the environment, contingency remedies will be evaluated and may be implemented.

SWMUs 36 & 37 (OU 9):

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The selected remedy for SWMUs 36 and 37 includes in-situ treatment of the groundwater contamination source areas, natural attenuation of the downgradient groundwater contaminant plumes, LUCs, and groundwater monitoring.

In-situ treatment of groundwater contamination source area consists of installing and operating AS systems in two groundwater contamination source areas "hot spots" to volatilize and aerobically biodegrade groundwater COCs. Natural attenuation of the downgradient groundwater contaminant plumes consists of letting naturally-occurring processes such as biodegradation, dispersion, dilution, and adsorption decrease concentrations of COCs to their cleanup goals. LUCs consist of prohibition of residential site development and groundwater use for drinking purpose until the cleanup goals are met. Regular site inspections are performed to verify continued implementation of these LUCs. Groundwater monitoring consists of long-term sampling and analysis of groundwater for quality to evaluate the progress of remediation and verify that COCs are not migrating. Additional information about the remedy selected for SWMUs 36 and 37 can be found in the ROD (TtNUS, 2001).

Site reviews are performed every 5 years to verify the continued adequacy of the selected remedy. If results from monitoring or any of the five-year reviews indicate that the selected remedy is no longer protective of human health and the environment, contingency remedies will be evaluated and may be implemented.

Every year the Permittee will prepare a review of the remedy effectiveness and submit the report to the Department. The Permittee may at any time present additional information for remedy modification, including but not limited to discontinuing the remedy.

The Southern Division Naval Facilities Engineering Command's Environmental Services Department is responsible for implementing, monitoring, maintaining, reporting upon and enforcing the remedies under this permit, including Land Use Controls.

HSWA PART XIV – CORRECTIVE MEASURES IMPLEMENTATION (CMI)

1. For SWMUs with selected remedies requiring a detailed design, the Permittee shall submit a Corrective Measures Design (CMD) document and accompanying drawings to the Department within one hundred and eighty (180) days of the effective date of the permit modification for remedy selection or within the time frame established by the permit modification for remedy selection. The Department will either approve, request revisions, or conditionally approve the CMD and notify the Permittee of the conditions. The final Corrective Measures Design shall be submitted to the Department within sixty (60) days of receipt of the Department's comments on the draft CMD.
2. Upon notification by the Department, the Permittee shall prepare and submit a Corrective Measures Implementation (CMI) Work Plan for any SWMU or AOC which the Department determines warrants a CMI Work Plan. The CMI Work Plan shall be submitted within one hundred and eighty (180) days of the effective date of the permit modification for remedy selection or the date the Permittee receives approval of the Corrective Measures Design from the

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Department (for remedies that the Department determines require a detailed design) or within the time frame established by the permit modification for remedy selection. This work plan shall include a proposed schedule for implementation of corrective measures.

3. Where Land Use Controls comprise part of the final remedy at a SWMU or AOC, the Permittee shall prepare and submit a Land Use Control Implementation Plan (LUCIP) as part of, appended to, or in lieu of a CMI Work Plan. The permit provisions that apply to the CMI Work Plan apply to any such LUCIP. The LUCIP would provide detail and specific measures required for the Land Use Controls selected, including establishing, implementing, monitoring, maintaining, reporting, and enforcing requirements for the SWMU or AOC.
4. The CMI Work Plan must be approved by the Department prior to implementation. This approval may be in emails, by formal letters, or other alternate reporting or approval processes, as authorized by the Department. The Department shall specify the start date of the CMI in the letter approving the Work Plan. However, the Permittee(s) is free to proceed at its own risk with the actions outlined in the work plan(s) if it has not received a response from FDEP within 45 days of receipt of the work plan(s) by the Department. If the Department disapproves the CMI Work Plan, the Department shall either (1) notify the Permittee in writing of the CMI Work Plan's deficiencies and specify a due date for submission of a revised CMI Work Plan, (2) revise the CMI Work Plan and notify the Permittee of the revisions and the start date of the schedule, or (3) conditionally approve the CMI Work Plan and notify the Permittee of the conditions.
5. Within ninety (90) days of completion of Corrective Measures Implementation (CMI), the Permittee shall submit to the Department a CMI Report, including a certification of completion of the corrective measures activities. The CMI Report shall demonstrate compliance with all media cleanup levels or goals. For long-term corrective measures activities in which the corrective action system must operate for an indefinite period of time prior to achieving cleanup goals/levels, the CMI Report and certification must document that the corrective action system is constructed in accordance with the approved CMD and is operational and functional, must outline any Operation and Maintenance (O&M) necessary, and must document that the system is in compliance with all applicable federal, State, and local regulations. The Department will either approve the Report or request revisions. The final CMI Report shall be submitted to the Department within sixty (60) days of receipt of the Department's comments on the draft CMI Report. Approval of the final CMI report constitutes remedy completion, or construction completion for long-term corrective measures.
6. For corrective measures involving the cleanup of groundwater, the Permittee must demonstrate that the concentration of constituents of concern remain below Groundwater Cleanup Target Levels (GCTLs) for a maximum of two (2) consecutive sampling events, the frequency of which to be determined by the Department for each SWMU. However, for SWMUs where the operation of an active remediation system has recently been terminated and contaminant rebound may be of concern, the Permittee shall demonstrate that the contaminants of concern that were present prior to the initiation of active remediation remain below the GCTLs for a minimum of one year after system shutdown. Sampling frequency during this period shall also be as determined by the Department.

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7. If the time required to complete corrective measures implementation is greater than one hundred eighty (180) calendar days, the Permittee shall provide the Department with progress reports at intervals as specified by the Department in the CMI Work Plan approval letter. The progress reports shall, at a minimum, contain the following information:
 - a. A description of the portion of the CMI completed;
 - b. Summaries of compliance with and progress toward achieving cleanup goals;
 - c. Summaries of any deviations from approved CMD or CMI work plan during the reporting period;
 - d. Summaries of current and potential problems including recommended solutions and alternatives as well as corrective actions undertaken; and
 - e. Projected work and impacts to approved schedule.

Progress reports and updates provided at the Cecil Field BRAC Cleanup Team meetings shall meet the requirement of this section.

8. With respect to Land Use Controls, the CMI shall include:
 - a. Identification of the objective(s) of the land use control;
 - b. Those actions required to achieve each identified objective, including but not limited to, restricting public access to an area for recreational use;
 - c. Actions required to maintain the LUC which may be included by reference;
 - d. How each LUC will be monitored to ensure its continuing protectiveness which may be included by reference;
 - e. The frequency of reporting on the integrity and protectiveness of the LUC under the standards outlined in the Statement of Basis which may be included by reference;
 - f. The entity(ies) responsible for implementing, maintaining, monitoring and enforcing the LUC; and,
 - g. A commitment for reporting to FDEP and taking prompt corrective action in the event of a breach of the LUC.

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**Appendix A
 Solid Waste Management Unit Summary**

A.1. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring a RCRA Facility Investigation (RFI):	
SWMU/AOC No/Letter	SWMU/AOC
SWMU 15	Site 15, Ordnance Disposal Area Blue 10, OU 5
SWMU 21	Site 21, Golf Course Pesticide Mixing Area, OU 10,(Including Bldg 874 Public Toilet)
SWMU 25	Site 25, Bldg 101 Former Transformer Storage Area, OU 10, Includes 80-OW1, 80-OW2, and 80-OW4
SWMU 32	PSC 32, HAZMAT Warehouse Storage Area, OU 12
SWMU 45	Site-45, Bldg 11 Steam Plant OU 11
SWMU 49	Site-49, Main Base Skeet Range, OU 9
SWMU 151	Site 57, Bldg 824 GW Plume, OU 9,
SWMU 152	Site-58, Bldg 312 GW Plume, OU 9
A.2. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time:	
SWMU/AOC No/Letter	SWMU/AOC
SWMU 7	Site 7, Old Fire Fighting Training Area, OU 3
SWMU 11	Pesticide Disposal Area, OU 6
SWMU 22	PSC 22, Fairway 7 Wooded Area Rubble Pile
SWMU 26	AOI 26, Bldg 81 Pesticide Storage Area
SWMU 27	AOI 27, Bldg 201 HAZMAT Shed
SWMU 29	AOI 29, Temporary Collection Point
SWMU 30	PSC 30, Bldg 313 Floor Wash Disposal Area
SWMU 33	AOI 33, DRMO Storage Yard

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A.2. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time:	
SWMU/AOC No/Letter	SWMU/AOC
SWMU 38	PSC 38, PCB Runway 9RT Taxiway
SWMU 44	PSC 44, Ditch from DRMO to Bldg 15 OU 12
SWMU 50	PSC 50, Bldg 98 PAH Soil Contamination removal
SWMU 52	PSC 52, Bldg 314 Soil Contamination
SWMU 53	PSC 53, Bldg 241 Soil Contamination
SWMU 56	PSC 56, Retention Pond West of Hangar 815
SWMU 58	Building 817
SWMU 65	Bldg 255
SWMU 88	Building 825LS
SWMU 90	Building 929
SWMU 92	Building 559
SWMU 97	Building 312LS
SWMU 100	Building 47
SWMU 102	Building 83 Lighting Vault
SWMU 107	Bldg 233 Aircraft Wash Rack
SWMU 120	Building 853
SWMU 130	Building 312
SWMU 145	Building 852
SWMU 175	Building 815 - Hangar 815 PCB dig

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A.3. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring Corrective Measures Study (CMS):				
SWMU/AOC No/Letter	SWMU/AOC Name	Unit Comment	Dates of Operation	Potentially Affected Media
There are no units identified at this time as requiring Corrective Measures Study (CMS).				
A.4. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring Confirmatory Sampling:				
SWMU/AOC No/Letter	SWMU/AOC Name	Unit Comment	Dates of Operation	Potentially Affected Media
There are no units identified at this time as requiring Confirmatory Sampling (CS).				
A.5. List of solid waste management units (SWMUs) and areas of concern (AOCs) undergoing Corrective Measures Implementation (CMI):				
SWMU/AOC No/Letter	SWMU/AOC Name			
SWMU 1	Site 1, Old Landfill, OU1			
SWMU 2	Site 2, Recent Landfill, OU 1			
SWMU 3	Site 3, Oil Sludge Disposal Area, OU 8			
SWMU 5	Site 5, Oil Disposal Area NW, OU 2			
SWMU 8	Site 8, Fire Fighting Training Area and Bore Site Range, OU 3			
SWMU 16	Site 16, AIMD Seepage Pit, OU 7			
SWMU 17	Site 17, Oil/Sludge Disposal Area-SW, OU 2			
SWMU 36	Site 36, Control Tower TCE Plume, OU 9			
SWMU 37	Site 37, Hangar 13 & 14 DCE Plume, OU 9			
A.6. List of solid waste management units (SWMUs) and areas of concern (AOCs) undergoing clean up under 62-770 F.A.C.:				
SWMU/AOC No/Letter	SWMU/AOC Name			
SWMU 3A	Helicopter Crash Site on Site 3			
SWMU 13	Day Tank 1 A.K.A. Bldg 293			

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A.6. List of solid waste management units (SWMUs) and areas of concern (AOCs) undergoing clean up under 62-770 P.A.C.	
SWMU/AOC No/Letter	SWMU/AOC Name
SWMU 45A	Bldg 11 Tanks 11B, 11C, 11D
SWMU 46	PSC 46, Bldg 72 and 177 PAH soil Contamination
SWMU 48	NFF Waste Oil Tank 285 ST
SWMU 50A	Bldg 98 Railroad Track Soil Removal
SWMU 54A	Tank 290-A
SWMU 63	Tank 80C
SWMU 64	Tank 80-OW3 and OW5
SWMU 68	Tank 81
SWMU 72	Jet Engine Test Cell Building 334, Tank 334-O/W & Bldg 811
SWMU 74	South Fuel Farm
SWMU 77	Building 9 - Tanks 9L1 & 9L2
SWMU 80	Bldg 271 Oil water separators 271 SE-OW and 271-OW, and tanks 271UL, 271R, 271SUL, 271D
SWMU 82	Tank 325-OW
SWMU 85	Day Tank 2
SWMU 99	Bldg 40 petroleum excavation
SWMU 108	Tank 825-OW
SWMU 109	Transportation and Fuel Management Compound. Tank 80-132, 80-133, 80-134, & 80-135
SWMU 142	Bldg 824/824A (Including 824 BRAC dig, oil water separator 824-OW, oil water separator 824A-OW)
SWMU 143	Bldg 1848
SWMU 150	Building 1845 and 1845 OW.
SWMU 152A	Building 312, Tank 312-OW,
SWMU 154	Building 635 Railroad Track Soil Removal

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A.6 List of solid waste management units (SWMUs) and areas of concern (AOCs) undergoing cleanup under 62-70 E.A.C.	
SWMU/AOC No/Letter	SWMU/AOC Name
SWMU 156	Bldg 82, Tank G82
SWMU 158	Bldg 337, Tank 337
SWMU 160	Bldg 860 Tanks 860A, 860B, 860D
SWMU 161	9 RT LENS contaminated soil
SWMU 162	JP-5 Pipeline: Valve Box #2
SWMU 164	North Fuel Farm Area [including Tanks 76A, 76B, 76C, 76D, 76E, 76F, Dam Sites (AVORD, Gate 10, Alpha, Possum, Gate 14), AVORD Perimeter Road, North Containment Pond, and Bank Sites (93I-6, 93I-10, 93I-18, 93I-20, 93I-36, 93I-37, 93I-45, 93I-51, 93I-53)]
SWMU 165	Truck Stand (Bldg 75 and 372)
SWMU 170	Building 46, Tanks 46R, 46D, 46SUL and 46UL
SWMU 172	Building 199, Tank 199
SWMU 181	BP Wells
SWMU 182	North-South Apron Plume
SWMU 188	Former Fuel Depot Railroad Track Site
SWMU 190	Building 842, Tank G842B
SWMU 193	Bldg 80, Tank 80
SWMU 194	Hangar 815 Wash Rack
SWMU 196	Tanks 81A, 81B, 81C
SWMU 4	PSC 4, Grease Pits
SWMU 6	PSC 6, Lake Fretwell Rubble Disposal Area
SWMU 9	PSC 9, Recent Grease Pits

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A-7. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time that will be removed from the Permit at Issuance:	
SWMU/AOC No/Letter	SWMU/AOC
SWMU 10	Site 10, Rubble Disposal Area, OU 4
SWMU 12	PSC 12, Public Works Rubble Disposal Area
SWMU 14	Site 14, Ordnance Disposal Area Blue 5, OU 5
SWMU 18	PSC 18, Ammunition Disposal Area
SWMU 19	PSC 19, Rubble Disposal Area
SWMU 20	AOI 20, Building 610-Former TSD Facility
SWMU 23	AOI 23, AVORD Bldg 65 Red Paint in Soils
SWMU 24	AOI 24, AVORD Pistol Range
SWMU 28	AOI 28, North Temporary Collection Point
SWMU 31	PSC 31, South Temporary collection Point
SWMU 34	AOI 34, Rowell Creek Ordnance Disposal Area
SWMU 35	AOI 35, Perimeter Road
SWMU 39	PSC 39, Runway Outfalls (14 outfalls)
SWMU 40	PSC 40, YWWA A-4 Imhoff Tank, Bldg 682
SWMU 41	PSC 41, YWWA Mobil Target Range PCB Soil
SWMU 42	PSC 42, YWWA Former PWC Steam Plant OU 12
SWMU 43	PSC 43, Bldg 617 (PAH soil removal)
SWMU 43A	Tank 617 (Bldg 617)
SWMU 47	PSC 47, Bldg 308 & 838 Soil Contamination

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A-7. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time that will be removed from the Permit at Issuance.	
SWMU/AOC No/Letter	SWMU/AOC
SWMU 51	Building 200 Oil Water Separator 200-OW and Tank 200 OW
SWMU 54	PSC 54, Bldg 290
SWMU 55	PSC 55, Bldg 805 Recycling Center
SWMU 57	Bldg 858, 858-OW
SWMU 59	Whitehouse-off site F-18 Crash
SWMU 60	Bldg 647, Environmental Storage Department
SWMU 61	Building 616 Standby Generator Facility
SWMU 62	Bldg 1847 Fire Pump House
SWMU 62A	Bldg 1847 Tanks G1847 A, B, C
SWMU 66	Building 818
SWMU 67	Oil/Water Separator 1821 OW
SWMU 69	Building 249 (transformer associated with Bldg 216)
SWMU 70	Building 216 (Fire Pump/Air Compressor bldg)
SWMU 71	Building 224LS
SWMU 73	Building 900, Tank 900
SWMU 75	Bldg 880
SWMU 76	Bldg 6 UNF Hangar 860 Wash Rack
SWMU 78	950 Self Help Facility
SWMU 79	Building 1846, Tanks 1846-1 and 1846 OW2

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A list of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time that will be removed from the Permit at issuance.	
SWMU/AOC No/Letter	SWMU/AOC
SWMU 81*	F-18 Crash Site Ocala
SWMU 83	Building 3073 Yellow Water Exchange
SWMU 84	Building 1823 Tank 1823 and 1823 OWS
SWMU 86	Building 810
SWMU 87	Bldg 273 / Tank 136
SWMU 89	Building 832
SWMU 91	Building 558
SWMU 93	Building 595 and Tank 595
SWMU 94	Tank G872LS
SWMU 95	Building 288
SWMU 96	Building 288A
SWMU 98	Building 15
SWMU 101	Building 65
SWMU 103	Building 94
SWMU 104	Building 140
SWMU 105	Building 535 Loading Dock BRAC Dig
SWMU 106	Building 200
SWMU 110	Building 329
SWMU 111	Building 1820

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A7. List of solid waste management units (SWMUs) and areas of concern (AOCs) that are being removed from the permit at this time that will be removed from the Permit at Issuance.	
SWMU/AOC No/Letter	SWMU/AOC
SWMU 112	Building 1
SWMU 113	S3 Crash Site North of NFF
SWMU 114	Site A-5 Former Small Arms Range
SWMU 115	Building 179
SWMU 116	T-45 Crash Site
SWMU 117	Building 860 Tank 860OW
SWMU 118	Building 864LS
SWMU 119	Building 504
SWMU 121	Building 1820LS
SWMU 122	Building 823LS
SWMU 123	Building 18LS
SWMU 124	Building 4
SWMU 125	Building 624
SWMU 126	Building 7
SWMU 127	Building 91
SWMU 128	Building 193
SWMU 129	Building 289
SWMU 129A	Building 289, Tank G289A
SWMU 131	Building 324

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A-7. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time that will be removed from the Permit at Issuance.	
SWMU/AOC No/Letter	SWMU/AOC
SWMU 132	Building 364
SWMU 133	Bldg 500
SWMU 134	Bldg 502 Tank 502
SWMU 135	Building 540
SWMU 136	Building 621LS
SWMU 137	Building 625
SWMU 138	Building 626
SWMU 139	Building 637
SWMU 140	Building 709
SWMU 141	Building 823 (Fuel Ops) and 823 O/W separator
SWMU 144	Building 848
SWMU 146	Building 859LS
SWMU 147	Building 871
SWMU 148	Building 898
SWMU 149	Building 927
SWMU 153	Building 605
SWMU 153A	Building 605, Tank 605
SWMU 155	Bldg 68 Tank 68
SWMU 157	Bldg 190 Tanks G190A, 190RI, 90OU

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A-7. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time that will be removed from the Permit at Resurgence	
SWMU/AOC No/Letter	SWMU/AOC
SWMU 159	Tank 606
SWMU 163	Quarters F, Tank Quarters F
SWMU 166	Building 639, Tank G639
SWMU 167	Building 623, Tank 623
SWMU 168	Building 541, Tank G541U
SWMU 169	Building 607, Tank 607
SWMU 171	Building 367, Tank 367
SWMU 173	Building 220, Tank 220
SWMU 174	Building 327, Tank G327A
SWMU 176	Building 404, Tank 404
SWMU 177	Building 406, Tank 406
SWMU 178	Building 428, Tank 428
SWMU 179	Building 437, Tank 437
SWMU 180	Quarters K, Tank K
SWMU 183	Water Tower 16A
SWMU 184	Water Tower 16B
SWMU 185	Water Tower 16C
SWMU 186	Water Tower 16D
SWMU 187	Water Tower 631

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A.7. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time that will be removed from the Permit at issuance.	
SWMU/AOC No/Letter	SWMU/AOC
SWMU 189	Bldg 535 Railroad Track Soil Removal
SWMU 191	Building 30, Tank G30 and BRAC Dig
SWMU 192	Bldg 880 and Tank G880B
SWMU 195	Tank G16A

*Site is not on Contiguous property.

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Appendix B

RCRA Facility Investigation (RFI) Outline

The purpose of the RFI portion of the RCRA corrective action process is to evaluate the nature and extent of releases of hazardous wastes and/or hazardous constituents and to gather necessary data to support the CMS and/or IM. Planning for the investigation is best accomplished through a logical progression of tasks:

1. Gather information on the source of the release(s) to the environment (Source Characterization),
2. Gather information on the physical aspects of the environment which will affect the migration and fate of the release and identification of exposure pathways for both humans and non-human members of the environment (Environmental Setting),
3. Use Source Characterization and Environmental Setting to develop a conceptual model of the release which will be used to plan and conduct a program to define the nature, rate and extent of the release (Sampling and Analysis Plan).

An RFI Work Plan and RFI Report are generally required elements of the RCRA corrective action process. The requirements for a full, detailed RFI are listed in this Appendix. The Department recognizes that each facility is unique. Therefore, the scope and requirements of the RFI shall be focused to fit the complexity of the site-specific situation. The work plan requirements listed in this Appendix in no way limit the site-specific opportunities for a Permittee. For example, the RFI may be implemented in phases. Relevant information contained in previously developed documents, such as a RCRA Part B permit application, may be referenced as appropriate, but must be summarized in either the RFI Work Plan or the RFI Report. In addition, the Department understands that Risk Assessments are becoming more widely utilized to place characterization information into context and to aid in determining remedial solutions. If a Risk Assessment is expected to be performed in the future, the Permittee and the contractor should meet with the Department to discuss the general format and process the Department expects a Risk Assessment to follow.

In some cases, it may be possible to implement the RFI concurrent with the CMS (also see Appendix C). This approach can save time and money because the earlier in the corrective action process potential remedies can be identified, the more effectively information gathering can be focused. The Department anticipates that a concurrent RFI/CMS approach may be appropriate in the following types of situations, among others: facilities where removal remedies have been proposed by the owner/operator, facilities with straightforward remedial solutions or where presumptive remedies can be applied, facilities where few remedial options are available, and facilities where the remedy is phased. The Department will determine on a case-by-case basis if a concurrent RFI/CMS is appropriate. Because of the unique data collection requirements necessary for a remedial solution which includes natural attenuation of contaminants in groundwater, if natural attenuation is expected to be part of the remedial solution, then the Sampling and Analysis Plan should be crafted to include monitoring of specific water quality parameters unique to natural attenuation (*e.g.*, nitrites/nitrates, ferrous iron, sulfides, dissolved oxygen, methane, hydrogen, *etc.*).

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I. RFI WORK PLAN REQUIREMENTS - ELEMENTS OF THE RFI WORK PLAN

The RFI Work Plan shall include, at a minimum, the following elements:

A. Introduction - Summary of any relevant existing assessment data

The Permittee shall describe the purpose or objective of the RFI Work Plan and provide a summary of any existing environmental data, which is relevant to the investigation. The summary should provide the following items, at a minimum:

1. Land ownership history;
2. Facility operating dates;
3. Facility's product(s);
4. Raw materials used in facility operations, wastes generated;
5. Nature and extent of any known contamination;
6. Summary of an ongoing IM and past assessments; and,
7. Summary of permit objective and how this objective will be satisfied.

B. Environmental Setting

The Permittee shall provide information on the environmental setting at the facility. The Permittee shall characterize the Environmental Setting as it relates to identified sources, pathways and areas of releases of hazardous constituents from Solid Waste Management Units (SWMUs) and/or Areas of Concern (AOCs). Data gaps pertinent to characterization of releases shall be identified and provisions made in Section E to obtain the relevant information to fill the data gap. The Environmental Setting shall cover the following items, at a minimum:

1. Hydrogeology

The Permittee shall provide a summary of the hydrogeologic conditions at the facility. This discussion shall include, but not be limited to, the following information:

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

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- (2). Structural geology: description of local and regional structural features (*e.g.*, folding, faulting, tilting, jointing, metamorphic foliation, *etc.*);
 - (3). Depositional history;
 - (4). Regional and facility specific groundwater flow patterns (porous media, fracture media, karst media); and,
 - (5). Identification and characterization of areas and amounts of recharge and discharge (springs in karst terrane, base level streams and rivers).
- b. An analysis of any topographic features that might influence the groundwater flow system (*e.g.*, sinkholes and sinking streams in karst terranes).
- c. Based on any existing field data, tests (*e.g.*, pump tests, tracer 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:
- (1). Hydraulic conductivity and porosity (total and effective), groundwater flow velocity, groundwater basin discharge;
 - (2). Lithology, grain size, sorting, degree of cementation;
 - (3). An interpretation of hydraulic interconnections between saturated zones (*i.e.*, aquifers) and surface waters; and
 - (4). The attenuation capacity and mechanisms of the natural earth materials (*e.g.*, ion exchange capacity, organic carbon content, mineral content, *etc.*).
- d. Based on data obtained from groundwater monitoring wells and piezometers installed upgradient, water wells and/or springs downgradient of the potential contaminant source, a representative description of water level or fluid pressure monitoring including:
- (1). Water-level contour and/or potentiometric maps, including seasonal variations;
 - (2). Hydrologic cross sections showing vertical gradients;
 - (3). The flow system, including the vertical and horizontal components of flow; and,
 - (4). Any temporal changes in hydraulic gradients, for example, due to tidal or seasonal influences and for karst terrane, stormflow.

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- e. A description of man-made influences that may affect the hydrology of the site, identifying:
 - (1). Local water supply and production wells with an approximate schedule of pumping; and;
 - (2).. Man-made hydraulic structures (pipelines, french drains, ditches, roofs, runways, parking lots, *etc.*).

2. Soils

The Permittee shall provide an explanation of the soil and rock units above the water table in the vicinity of contaminant release(s). This summary 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 sorption 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;

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- q. Evapotranspiration;
- r. Storage capacity;
- s. Vertical flow rate; and,
- t. Mineral content.

3. Surface Water and Sediment

The Permittee shall provide a description of the surface water bodies in the vicinity of the facility. This summary may include, but not be limited to, the following activities and information:

- a. Description of the temporal and permanent surface water bodies including:
 - (1). For lakes and estuaries: location, elevation, surface area, inflow, outflow, depth, temperature stratification, and volume;
 - (2). For impoundments: location, elevation, surface area, depth, volume, freeboard, and construction and purpose;
 - (3). 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;
 - (4). Drainage patterns; and;
 - (5). 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, chemical oxygen demand, total organic carbon, specific contaminant concentrations, *etc.*
- c. Description of sediment characteristics including:
 - (1). Deposition area;
 - (2). Thickness profile; and,
 - (3). Physical and chemical parameters (*e.g.*, grain size, density, organic carbon content, ion exchange capacity, pH, *etc.*).

4. Air

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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:
 - (1). Annual and monthly rainfall averages;
 - (2). Monthly temperature averages and extremes;
 - (3). Wind speed and direction;
 - (4). Relative humidity/dew point;
 - (5). Atmospheric pressure;
 - (6). Evaporation data;
 - (7). Development of inversions; and,
 - (8). 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 man-made features which affect air flow and emission patterns, including:
 - (1). Ridges, hills or mountain areas;
 - (2). Canyons or valleys;
 - (3). Surface water bodies (*e.g.*, rivers, lakes, bays, *etc.*); and,
 - (4). Buildings.

C. Source Characterization

For those sources from which releases of hazardous constituents have been detected, the Permittee shall provide analytical 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). Data gaps on source characterization shall be identified and provisions made in Section E to obtain the relevant information to fill the data gap. This summary shall include quantification of the following specific characteristics, at each source area:

1. Unit/Disposal Area Characteristics:
 - a. Location of unit/disposal area;

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- 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;
 - (1). Hazardous classification (*e. g.*, flammable, reactive, corrosive, oxidizing or reducing agent);
 - (2). Quantity; and,
 - (3). Chemical composition.
 - b. Physical and chemical characteristics such as:
 - (1). Physical form (solid, liquid, gas);
 - (2). Physical description (*e.g.*, powder, oily sludge);
 - (3). Temperature;
 - (4). pH;
 - (5). General chemical class (*e.g.*, acid, base, solvent);
 - (6). Molecular weight;
 - (7). Density;
 - (8). Boiling point;
 - (9). Viscosity;
 - (10). Solubility in water;

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- (11). Cohesiveness of the waste; and,
 - (12). Vapor pressure.
- c. Migration and dispersal characteristics of the waste such as:
- (1). Sorption capability;
 - (2). Biodegradability, bioconcentration, and biotransformation;
 - (3). Photodegradation rates;
 - (4). Hydrolysis rates; and,
 - (5). Chemical transformations.

D. Potential Receptors

The Permittee shall provide data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility. Data gaps pertinent to receptor analysis shall be identified and provisions made in Section E to obtain the relevant information to fill the data gap. The following characteristics shall be identified at a minimum:

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);
 - b. Location of groundwater users, to include withdrawal and discharge wells and springs, 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).

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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 the area adjacent to the facility.
6. A general demographic profile of the people who use 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.

E. Sampling and Analysis Plan(s) for Characterization of Releases of Hazardous Waste/Hazardous Constituents

The Permittee shall prepare a plan to document all monitoring procedures necessary to characterize the extent, fate and transport of releases (*i.e.*, identify sample locations, sample procedures and sample analysis to be 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). The sampling strategy and procedures shall be in accordance with a Department-approved Sampling and Analysis Plan (SAP) pursuant to Chapter 62-160, F.A.C. Any deviations from this reference must be requested by the applicant and approved by the Department. If a Risk Assessment is expected to be performed once release characterization is complete or nearly complete, Data Quality Objectives (DQO) for a Human Health Risk Assessment requires a Data Quality Objective of Level 3 or greater.

The Sampling and Analysis Plan must specifically discuss the following unless the SOP procedures are specifically referenced.

1. Sampling Strategy
 - a. Selecting appropriate sampling locations, depths, *etc.*;
 - b. Obtaining all necessary ancillary data;

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- c. Determining conditions under which sampling should be conducted;
- d. Determining which media are to be sampled (*e.g.*, groundwater, air, soil, sediment, subsurface gas);
- e. Determining which parameters are to be measured and where;
- f. Selecting the frequency of sampling and length of sampling period;
- g. Selecting the types of samples (*e.g.*, composite *vs.* grab) and number of samples to be collected.

2. Sampling Procedures

- a. Documenting field sampling operations and procedures, including;
 - (1). Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (*e.g.*, filters, preservatives, and absorbing reagents);
 - (2). Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;
 - (3). Documentation of specific sample preservation method;
 - (4). Calibration of field instruments;
 - (5). Submission of appropriate blanks (*e.g.*, field, equipment, trip, *etc.*);
 - (6). Potential interferences present at the facility;
 - (7). Construction materials and techniques, associated with monitoring wells and piezometers;
 - (8). Field equipment listing and sampling containers;
 - (9). Sampling order; and,
 - (10). Decontamination procedures.
- b. Selecting appropriate sample containers;
- c. Sampling preservation; and,
- d. Chain-of-custody, including:

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- (1). Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and,
 - (2). Pre-prepared sample labels containing all information necessary for effective sample tracking.
 - (3). Chain-of-custody seals for sample containers and shipping coolers.
3. Sample Analysis

Sample analysis shall be conducted in accordance with **SW-846: Test Methods for Evaluating Solid Waste - Physical/Chemical Methods** (most recent version) or an alternate approved method. The sample analysis section of the Sampling and Analysis Plan shall specify the following:

- a. Chain-of-custody procedures, including:
 - (1). 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;
 - (2). Provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and
 - (3). Specification of laboratory sample custody procedures for sample handling, storage, and dispersment for analysis.
- b. Sample storage (*e.g.*, maximum holding times for constituents);
- c. Sample preparation methods;
- d. Analytical Procedures, including:
 - (1). Scope and application of the procedure;
 - (2). Sample matrix;
 - (3). Potential interferences;
 - (4). Precision and accuracy of the methodology; and
 - (5). Method Detection Limits; and,
 - (6). Practical Quantitative Limits
- e. Calibration procedures and frequency;

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- f. Data reduction, validation and reporting;
- g. Internal quality control checks, laboratory performance and systems audits and frequency, including:
 - (1). Method blank(s);
 - (2). Laboratory control sample(s);
 - (3). Calibration check sample(s);
 - (4). Replicate sample(s);
 - (5). Matrix-spiked sample(s);
 - (6). "Blind" quality control sample(s);
 - (7). Control charts;
 - (8). Surrogate samples;
 - (9). Zero and span gases; and,
 - (10). Reagent quality control checks.
- h. External quality control checks by the Department, including:
 - (1). Spikes and blanks at sampling events for which the Department or its technical representative provides oversight; and,
 - (2). The equivalent of a CLP data package for samples split with the Department or for which the Department specifically requests the package.
- i. Preventive maintenance procedures and schedules;
- j. Corrective action (for laboratory problems); and
- k. Turnaround time.

F. 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.

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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 measures; and
- f. Result of analysis (*e.g.*, concentration, data qualifiers).

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.*):

- 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, both horizontally and vertically;
- d. Illustrate changes in concentration in relation to distances from the source, time, depth or other parameters; and,
- e. Indicate features affecting inter-media transport and show potential receptors.

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G. Project Management Plan - Schedule of Implementation

The Permittee shall prepare a Project Management Plan that will cover qualifications of personnel categories and the management control structure for the project. The Permittee shall also provide a schedule for completing the planned RFI activities. The schedule shall be as specific as possible (*i.e.*, it should indicate the number of days/weeks/months required for each major work plan task).

II. RFI REPORT REQUIREMENTS - ELEMENTS OF THE RFI REPORT

The RFI Report shall include, at a minimum, the following elements:

A. Introduction

The Permittee shall describe the purpose of the RFI Work Plan and provide a summary description of the project.

B. Environmental Setting

The Permittee shall describe the Environmental Setting in and around the facility. The RFI Work Plan should contain some, if not all, of the information on the Environmental Setting. Any information collected during work plan implementation that clarifies or improves understanding of the Environmental Setting should be provided in this section.

C. Source Characterization

The Permittee shall summarize the sources of contamination and nature of releases identified at the facility. The RCRA Facility Assessment and the RFI Work Plan should contain some, if not all, of the information on Source Characterization. Any information collected during work plan implementation or obtained from the sources (*e.g.*, voluntarily or from other Environmental Programs) that directly addresses Source Characterization shall be provided in this section.

D. Sampling and Analysis Results

The Permittee shall present data results obtained pursuant to the RFI Work Plan. The Permittee shall identify any work plan proposals that were not completed and explain why such actions were not finished. The Permittee shall also present its analysis/interpretation of how the sampling data meet the RFI objective and how the sampling data fits or modifies the contaminant conceptual model. For all analytical data, the Permittee shall discuss the results of data quality/data review.

E. Data Quality Assurance/Data Quality Data Review

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The Permittee shall perform a Quality Assurance/Quality Control data review on all data present in the RFI. The Quality Assurance/Quality Control data review shall be in accordance with the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (EPA-540/R94-013) and the USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review (EPA-540/R94-012), unless the Permittee has a Department-approved Quality Assurance Project Plan. The data review shall address the following, at minimum:

1. Holding times;
2. Blanks;
3. Laboratory Control Samples;
4. Field Duplicates;
5. Surrogate Recoveries;
6. Matrix Spike/Matrix Spike Duplicates; and,
7. Data Assessment - Data Usability.

F. Conclusions

The Permittee shall summarize the major conclusions reached after analysis of the environmental setting, source characterization, sampling and analysis results and data quality. Any data gaps needed to complete characterization of the scope and extent of the releases from SWMUs and/or AOCs or to refine further the contaminant conceptual model shall be identified and recommendations made in the Recommendations Section of the report.

G. Recommendations

The Permittee shall provide its recommendations on what, if any, further action is needed to complete the characterization of release(s) from SWMUs and/or AOCs.

H. Work Plan for Additional Investigations

If further investigations are determined to be needed to complete the objective of the RFI then the Permittee shall provide a work plan to complete characterization of the release(s).

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Appendix C

Corrective Measures Study (CMS) Outline

The purpose of the CMS portion of the RCRA corrective action process is to identify and evaluate potential remedial alternatives for the releases of hazardous constituents that have been identified at the facility through the RFI or other investigations to need further evaluation. The scope and requirements of the CMS are balanced with the expeditious initiation of remedies and rapid restoration of contaminated media. The scope and requirements of the CMS should be focused to fit the complexity of the site-specific situation. It is anticipated that Permittees with sites with complex environmental problems may need to evaluate a number of technologies and corrective measure alternatives. For other facilities, however, the evaluation of a single corrective measure alternative may be adequate. Therefore, a streamlined or focused approach to the CMS may be initiated. Information gathered during any stabilizations or interim measures will be used to augment the CMS and, in cases where corrective action goals are met, may be a substitute for the final CMS.

Regardless of whether a streamlined/focused or a detailed CMS is required, a CMS Work Plan and CMS Report are generally required elements. The requirements for a full, detailed CMS are listed below. The Department has the flexibility not to require sections of the plan and/or report, where site-specific situations indicate that all requirements are not necessary. Additionally, the Department may require additional studies besides these discussed in order to support the CMS.

I. CMS WORK PLAN

A. Elements of the CMS Work Plan

The CMS Work Plan shall include at a minimum the following elements:

1. A brief site-specific description of the overall purpose of the CMS;
2. A brief description of the corrective measure objectives, including proposed target media cleanup standards (*e.g.*, promulgated Federal and State standards) and preliminary points of compliance or a description of how a risk assessment will be performed (*e.g.*, guidance documents);
3. A brief description of the specific corrective measure technologies and/or corrective measure alternatives which will be studied;
4. A brief description of the general approach to investigating and evaluating potential corrective measures;
5. A detailed description of any proposed pilot, laboratory and/or bench scale studies;
6. A proposed outline for the CMS Report including a description of how information will be presented;

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7. A brief description of overall project management including overall approach, levels of authority (include organization chart), lines of communication, project schedules, budget and personnel. Include a description of qualifications for personnel directing or performing the work;
8. A project schedule that specifies all significant steps in the process and when key documents (*e.g.*, CMS Progress Reports, draft CMS Report) are to be submitted to the Department;
9. A detailed Public Involvement Plan.

II. CMS REPORT

The detail of a CMS may vary based upon the complexity of the site, on-going IM, *etc.* However, the CMS Report may include the following elements:

A. Introduction/Purpose

The Permittee shall describe the purpose of the CMS Report and provide a summary description of the project.

B. Description of Current Situation

The Permittee shall submit a summary and an update to the information describing the current situation at the facility and the known nature and extent of the contamination as documented by the RCRA Facility Investigation (RFI) Report. This discussion should concentrate on those issues that could significantly affect the evaluation and selection of the corrective measures alternative(s). The Permittee shall provide an update to information presented in the RFI regarding previous response activities and interim measures that have or are being implemented at the facility. The Permittee shall also make a facility-specific statement of the purpose for the response, based on the results of the RFI. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

C. Establishment of Proposed Media Specific Cleanup Standards

The Permittee shall describe the proposed media cleanup standards and point of compliance. The cleanup criteria must be either background, promulgated Federal and State standards, State cleanup criteria, or alternate risk-derived target cleanup levels. If media clean-up standards are not proposed, then the Department will unilaterally propose setting media clean-up standards to either background, promulgated Federal and State standards or the most conservative risk-derived standards.

D. Identification, Screening and Development of Corrective Measure Technologies

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1. Identification: List and briefly describe potentially applicable technologies for each affected media that may be used to achieve the corrective action objectives. Include a table that summarizes the available technologies.

The Permittee should consider innovative treatment technologies, especially in situations where there are a limited number of applicable corrective measure technologies.

2. Screening: The Permittee shall screen the corrective measure technologies to eliminate those that may prove infeasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies that have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations.

Site, waste, and technology characteristics used to screen inapplicable technologies are described in more detail below:

- a. Site Characteristics: Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration.
 - b. Waste Characteristics: Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of *in-situ* methods, direct treatment methods, and land disposal (on/off-site).
 - c. Technology Limitations: During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.
3. Corrective Measure Development: The Permittee shall assemble the technologies that pass the screening step into specific alternatives that have the potential to meet the corrective action objectives for each media. Options for addressing less complex sites could be relatively straightforward and may only require evaluation of a single or limited number of alternatives. Each alternative may consist of an individual technology or a combination used in sequence (*i.e.*, treatment train). Different alternatives may be considered for separate areas of the facility, as appropriate. List and briefly describe each corrective measure alternative.

E. Evaluation of a Final Corrective Measure Alternative

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For each remedy that warrants a more detailed evaluation (*i.e.*, those that passed through the screening step), including those situations when only one remedy is being proposed, the Permittee shall provide detailed documentation of how the potential remedy will comply with each of the standards listed below. These standards reflect the major technical components of remedies including cleanup of releases, source control and management of wastes that are generated by remedial activities. The specific standards are as follows:

1. Protect human health and the environment.
2. Attain media cleanup standards set by the Department.
3. Control the source of releases to reduce or eliminate, to the extent practicable, further releases that may pose a threat to human health and the environment.
4. Comply with applicable standards for management of wastes.
5. Other factors.

In evaluating the selected alternative or alternatives, the Permittee shall prepare and submit information that documents that the specific remedy will meet the standards listed above. The following guidance should be used in completing this evaluation.

1. Protect Human Health and the Environment

Corrective action remedies must be protective of human health and the environment. Remedies may include those measures that are needed to be protective, but are not directly related to media cleanup, source control or management of wastes. An example would be a requirement to provide alternative drinking water supplies in order to prevent exposures to releases from an aquifer used for drinking water purposes. Therefore, the Permittee shall provide a discussion of any short term remedies necessary to meet this standard, as well as discuss how the corrective measures alternative(s) meet this standard.

2. Attain Media Cleanup Standards

Remedies will be required to attain media cleanup standards. As part of the necessary information for satisfying this requirement, the Permittee shall address whether the potential remedy will achieve the remediation objectives. An estimate of the time frame necessary to achieve the goals shall be included. Contingent remedies may be proposed if there is doubt if the initial remedy will be successful (*e.g.*, contingent remedies to innovative technologies).

3. Control of Sources of Releases

The Permittee shall address the issue of whether source control measures are necessary, and if so, the type of actions that would be appropriate. Any source control measure proposed should include a discussion on how well the method is anticipated to work

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given the particular situation at the facility and the known track record of the specific technology.

4. Comply With any Applicable Standards for Management of Wastes

The Permittee shall include a discussion of how the specific waste management activities will be conducted in compliance with all applicable State and Federal regulations (*e.g.*, closure requirements, LDRs)

5. Other Factors

There are five general factors that will be considered as appropriate by the Department in selecting/approving a remedy that meets the four standards listed above. These five decision factors include:

- a. Long-term reliability and effectiveness;
- b. Reduction in the toxicity, mobility or volume of wastes;
- c. Short-term effectiveness;
- d. Implementability; and,
- e. Cost.

Examples of the type of information to include are provided below:

- (1). Long-term reliability and effectiveness: The Permittee may consider whether the technology, or combination of technologies, have been used effectively under analogous site conditions, whether failure of any one technology in the alternative would have any immediate impact on receptors, and whether the alternative would have the flexibility to deal with uncontrollable changes at the site. Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. In addition, each corrective measure alternative should be evaluated in terms of the projected useful life of the overall alternative and of its component technologies. Useful life is defined as the length of time the level of effectiveness can be maintained.
- (2). Reduction in the toxicity, mobility or volume of wastes: As a general goal, remedies will be preferred that employ techniques that are capable of eliminating or substantially reducing the potential for the wastes in SWMUs and/or contaminated media at the facility to cause future environmental releases. Estimates of how the corrective measure alternative will reduce toxicity, mobility and or volume of the waste is required and may be accomplished through a comparison of initial site conditions to expected post-corrective measures conditions.

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- (3). Short-term effectiveness: The Permittee shall evaluate each corrective measure alternative for short-term effectiveness. Possible factors to consider are fire, explosion, exposure to hazardous constituents, and potential threats associated with the treatment, excavation, transportation and re-disposal or containment of the waste material.
- (4). Implementability: Information to consider when assessing implementability include:
 - (a). The administrative activities needed to implement the corrective measure alternative (*e.g.*, permits, rights of way, *etc.*) and the length of time these activities will take;
 - (b). The constructibility, time for implementation, and time for beneficial results;
 - (c). The availability of adequate off-site treatment, storage capacity, disposal services, needed technical services and materials; and,
 - (d). The availability of prospective technologies for each corrective measure alternative.
- (5). Cost: The Permittee shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs. The capital costs shall include, but are not limited to, costs for: engineering, site preparation, construction, materials, labor, sampling/analysis, waste management/disposal, permitting, health and safety measures, *etc.* The operation and maintenance costs shall include labor, training, sampling and analysis, maintenance materials, utilities, waste disposal and/or treatment, *etc.* Costs shall be calculated as the net present value of the capital and operation and maintenance costs.

F. Justification and Recommendation of the Corrective Measure or Measures

The Permittee shall justify and recommend in the CMS Report a corrective measure alternative for consideration by the Department. Such a recommendation should include a description and supporting rationale for the preferred alternative that is consistent with the corrective action standards and remedy selection decision factors discussed above. In addition, this recommendation shall include summary tables that allow the alternative or alternatives to be understood easily. Trade-offs among health risks, environmental effects, and other pertinent factors shall be highlighted. The Department will select the corrective measure alternative or alternatives to be implemented based on the results presented in the CMS Report.

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Appendix D

Schedule of Compliance

Schedule of Compliance	Due Date
Notification of Newly Identified SWMUs and AOCs <i>Specific Conditions HSWA I.2 and HSWA I.3.</i>	Within fifteen (15) calendar days of discovery
SWMU Assessment Report <i>Specific Condition HSWA I.4.</i>	Within ninety (90) calendar days of notification
Notification for Newly Discovered Releases at Previously Identified SWMUs and AOCs <i>Specific Condition HSWA I.6.</i>	Within fifteen (15) calendar days of discovery
CS Work Plan for SWMUs or AOCs identified in Appendix A.3 <i>Specific Condition HSWA II.2</i>	Within forty-five (45) calendar days after effective date of permit
CS Work Plan for SWMUs identified under Condition HSWA I.5. , or AOCs identified under Specific Condition HSWA I.2. <i>Specific Condition HSWA II.2.</i>	Within forty-five (45) calendar days of notification by the Department
CS Report <i>Specific Condition HSWA II.5.</i>	In accordance with the approved CS Work Plan
RFI Work Plan for SWMU(s) and AOC(s) identified under Specific Condition HSWA I.1.a. <i>Specific Condition HSWA III.1.</i>	Within ninety (90) calendar days from effective date of permit
RFI Work Plan for SWMU(s) and AOC(s) Identified under Specific Conditions HSWA I.5, HSWA I.7, or HSWA II.6. <i>Specific Condition HSWA III.2.</i>	Within ninety (90) calendar days after receipt of notification by the Department which SWMUs or AOCs require an RFI

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Schedule of Compliance	Due Date
Draft RFI Report <i>Specific Condition HSWA III.6.</i>	In accordance with the approved RFI Work Plan
Final RFI Report <i>Specific Condition HSWA III.8.</i>	Within thirty (30) calendar days after receipt of Department's final comments on Draft RFI Report
RFI Progress Reports <i>Specific Condition HSWA III.9.</i>	Quarterly, beginning ninety (90) calendar days from the start date specified by the Department*
IM Work Plan <i>Specific Condition HSWA IV.1.</i>	Within thirty (30) calendar days of notification by the Department
IM Progress Reports <i>Specific Condition HSWA IV.8.</i>	In accordance with the approved IM Work Plan ** or semi-annually for Permittee-initiated IM
IM Report <i>Specific Condition HSWA IV.9.</i>	Within ninety (90) calendar days of completion
CMS Work Plan <i>Specific Condition HSWA V.1.</i>	Within ninety (90) calendar days of notification by the Department that a CMS is required
Implementation of CMS Work Plan <i>Specific Condition HSWA V.4.</i>	Within fifteen (15) calendar days after receipt of the Department approval of Plan
Draft CMS Report <i>Specific Condition HSWA V.5.</i>	In accordance with the schedule in the approved CMS Work Plan
Final CMS Report <i>Specific Condition HSWA V.5.</i>	Within thirty (30) calendar days of the Department's final comments on Draft CMS Report
Demonstration of Financial Assurance <i>Specific Condition HSWA VI.3.</i>	Within one hundred twenty (120) calendar days after permit modification for remedy

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Schedule of Compliance	Due Date
Noncompliance/Imminent Hazard Report <i>General Condition 8.</i>	Oral within 24 hours and written within fifteen (15) calendar days of becoming aware of the hazardous circumstances
Written report of noncompliance of tanks, surface impoundments or containers with 40 CFR 264.1082(c)(1) or (c)(2) (Subpart CC).	Within fifteen (15) calendar days of becoming aware of noncompliance
<p>The above reports must be signed and certified in accordance with 40 CFR 270.11 and Rule 62-730.220(6), (7) and (8), F.A.C.</p> <p>* This applies to Work Plan execution that requires more than one hundred-eighty (180) calendar days</p> <p>** This applies to Work Plan execution that requires more than one year.</p> <p>The schedule in the SMP takes precedence over the Schedule of Compliance provided in Appendix D. If at any time the Department determines that a requested update of the SMP is appropriate, the SMP schedule shall be updated to reflect the approved changes. Once the Department has approved the update, the updated SMP schedule shall take precedent over the previous SMP schedule and the Schedule of Compliance provided in Appendix D.</p>	

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1. MCLs; or
 2. For constituents for which MCLs have not been promulgated, a concentration, which satisfies the criteria specified in section I.A.1 through I.A.4 of this appendix shall be calculated.
- B. In deriving human health Screening Levels for constituents for which MCLs have not been promulgated, the recommended equations/assumptions shall be developed using the Department's Groundwater Cleanup Target Levels. Because the science of risk assessment is in flux and technical criteria/opinion of today (*e.g.*, content of standardized equations, use of default exposure assumptions, *etc.*) may change, the Department reserves the right to revise the above recommended equations/assumptions as needed to meet the criteria listed in section I.A.1 through I.A.4 of this appendix.

III. Surface Water

- A. Screening Levels for constituents in surface water shall be concentrations specified as:
1. Water Quality Standards established pursuant to the Clean Water Act by the Department, where such standards are expressed as numeric values; or
 2. Numeric interpretations of Department narrative water quality standards where water quality standards expressed as numeric values have not been established by the Department; or
 3. MCLs for constituents in surface water designated by the Department for drinking water supply, where numeric values, or numeric interpretations described in paragraphs 1 and 2 immediately above, are not available; or
 4. For constituents in surface waters designated by the Department for drinking water supply for which numeric values, numeric interpretations, or MCLs are not available, a concentration which meets the criteria specified in section I.A.1 through I.A.4 of this appendix shall be calculated assuming exposure through consumption of the water contaminated with the constituent; or
 5. For constituents in surface waters designated for use or uses other than drinking water supply and for which numeric values or numeric interpretations have not been established, a concentration established by the Department which meets the criteria specified in section I.A.1 through I.A.4 of this appendix shall be calculated.
- B. In deriving human health Screening Levels for constituents in surface water, the recommended equations/assumptions shall be developed using Department guidance.

IV. Air

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Appendix E

Screening Levels

I. Definition

Screening Levels are the Department's conservative risk-based concentrations of hazardous constituents determined to be indicators for the protection of human health or the environment. Screening Levels shall be set for all hazardous constituents, a subset of hazardous wastes, identified in the RFI Report(s) or for those hazardous constituents that the Department has reason to believe may have been released from a solid waste management unit (SWMU) or Area of Concern (AOC) at the facility. Should the concentration of a hazardous constituent(s) in an aquifer, surface water, soils, or air exceed its Screening Level for any environmental medium, the Department may require that the Permittee conduct a Corrective Measure Study (CMS) to meet the requirements of HSWA Part V, Appendix C, and 40 CFR 264.101. If the Department determines that a constituent(s) released from a SWMU or AOC in quantities below its respective Screening Level(s) may pose a threat to human health or the environment, given site-specific exposure conditions, cumulative effects, ecological concerns, *etc.*, then the Department has the authority to require a CMS to meet the requirements of HSWA Part V, Appendix C, and 40 CFR 264.101.

Screening Levels shall be concentration levels, which satisfy the following criteria:

- A.
 1. Is derived in a manner consistent with Department guidelines for assessing human and environmental health risks from hazardous constituents; and
 2. Is based on scientifically valid studies conducted in accordance with the Toxic Substances Control Act (TSCA) Good Laboratory Practice Standards, or equivalent; and
 3. For human health Screening Levels to address carcinogens, represents a concentration associated with an excess upper bound lifetime cancer risk of 1×10^{-6} for carcinogens due to continuous constant lifetime exposure; and
 4. For human health Screening Levels to address systemic toxicants, represents a concentration to which the human population (including sensitive subgroups) could be exposed on a daily basis that is likely to be without appreciable risk of deleterious effects during a lifetime in accordance with Department procedures.
- B. For constituent(s) detected in groundwater, air, surface water, or soils, for which a concentration level that meets the criteria specified in section I.A.1 through I.A.4 of this appendix is not available or possible, the Screening Level for the constituent(s) shall be the background concentration of the constituent(s).

II. Groundwater

- A. Screening Levels for constituents in groundwater shall be concentrations specified as:

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- A. Air emissions shall not exceed the Department's conservative risk-based concentrations.

V. Soils

- A. Screening Levels for constituents in soils shall be concentrations which meet the criteria specified in section I.A.1 through I.A.4 of this appendix.
- B. The calculation of human health Screening Levels for soil includes several specific exposure routes which must be evaluated individually: 1) ingestion, 2) inhalation and 3) leachability to groundwater. In deriving Screening Levels to address ingestion, inhalation and leaching, the methodology/assumptions shall be those in Department guidance. Because the science of risk assessment is in flux and technical criteria/opinion of today (*e.g.*, content of standardized equations, use of default exposure assumptions, *etc.*) may change, the Department reserves that right to revise the above recommended equations/assumptions as needed to meet the criteria listed in section I.A.1 through I.A.4 of this appendix.

VI. Sediment

- A. Screening Levels for constituents in sediment shall be based on whether human health or ecological health is the major concern. If ecological concerns are deemed to predominate, then Screening Levels for constituents in sediment shall be concentrations based on the latest sediment screening values as calculated by the Department. Because the science of risk assessment is in flux and technical criteria/opinion of today (*e.g.*, content of standardized equations, use of default exposure assumptions, *etc.*) may change, the Department reserves that right to revise the above recommended equations/assumptions as needed to meet the criteria listed in section I.A.1 through I.A.4 of this appendix.

If an ecological sediment screening value for a constituent of concern has not been generated by the Department and cannot be generated using the criteria in sections I.A.1 and I.A.2 of this appendix, then the ecological Screening Level for sediment shall be background. If human health is the prevailing concern, then the human health Screening Level for sediment shall address all applicable exposures.

Issued

February 18, 2004

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Dotty Diltz

Dotty Diltz, ASSISTANT DIRECTOR
DIVISION OF WASTE MANAGEMENT

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Filing and Acknowledgment
Filed on this date, pursuant to
Section 120.52, Florida Statutes,
with the designated Clerk, receipt
of which is acknowledged.

Kim Shurby
CLERK

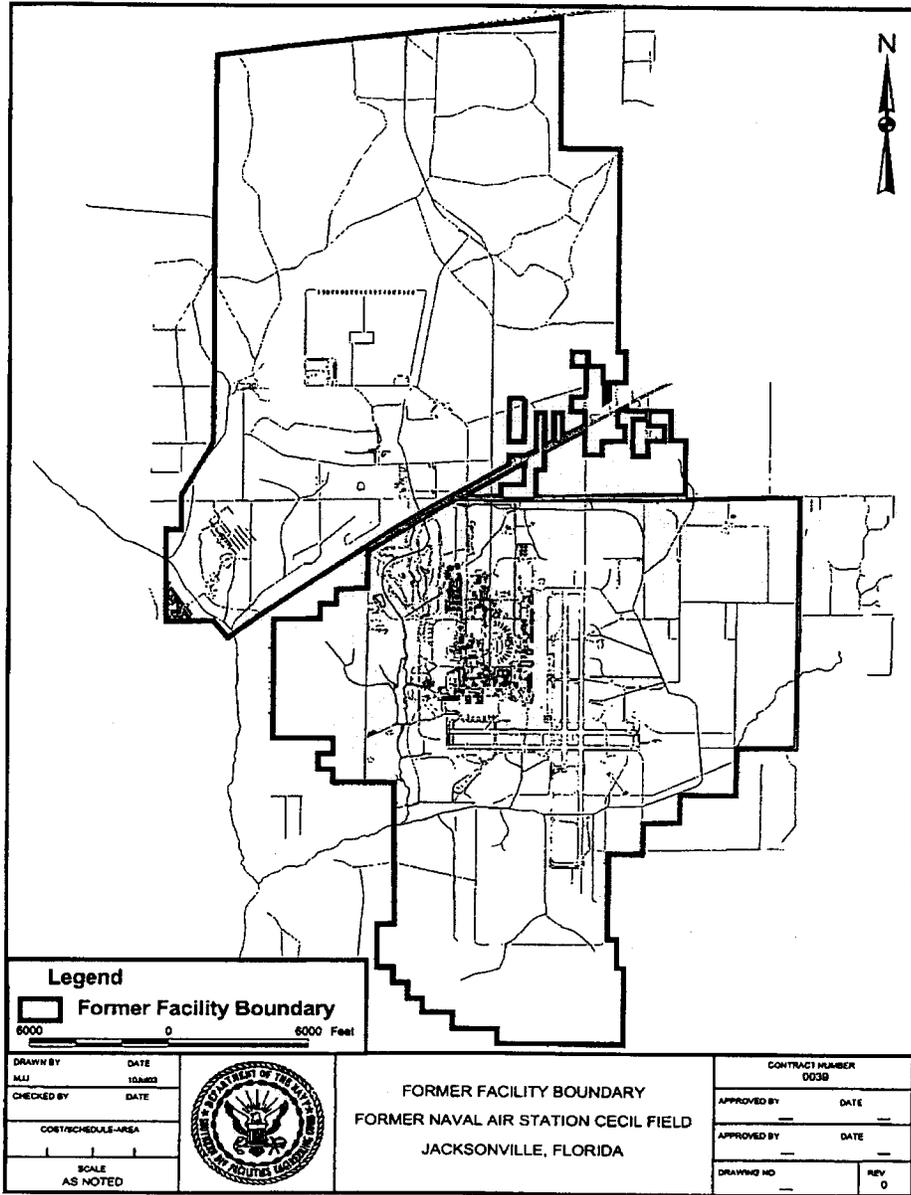
2-18-04
DATE

This is to certify that this Notice of Permit was mailed before
close of business on February 18, 2004.

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Attachment 1 – Cecil Field Boundary



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Attachment 2 – Navy Property Currently

