



# Department of Environmental Protection

Jeb Bush  
Governor

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

David B. Struhs  
Secretary

PERMITTEE:  
Perma-Fix Environmental Services, Inc.  
1940 NW 67<sup>th</sup> Place  
Gainesville, Florida 32653

ATTENTION:  
Mr. Raymond Whittle  
General Manager

I.D. NUMBER: FLD 980 711 071  
PERMIT/CERTIFICATION NUMBER: 17680-006-HO  
EXPIRATION DATE: June 8, 2005  
COUNTY: ALACHUA  
LATITUDE / LONGITUDE: 29°42'08" N/82°20'51" W  
SECTION/TOWNSHIP/RANGE: 18/19S/20E  
PROJECT: Operation of a hazardous waste treatment, storage facility consisting of a tank, two container storage areas, and two miscellaneous treatment units, and implementation of HSWA 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, 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:

1. To operate one (1) enclosed container storage area, to be located in the Treatment and Operations Building (TOB), as described in Figure I.D.1 and Part II, Section B of the permit application dated September 22, 1997 and revised Dec 10, 1999. The TOB container storage area will contain seven (7) zones for storage of hazardous radioactive mixed waste only in containers ranging from ½-gallon to 55-gallon drums and other D.O.T. approved containers of 550 gallons or less. The permit authorizes the storage of a maximum volume of 35,200 gallons of hazardous radioactive mixed waste in the TOB storage area. The container storage area will include a containment system that consists of 6" x 6" concrete curbing to prevent run-off. The hazardous waste codes for the waste to be stored in the TOB are listed in **Attachment A** of the permit.
2. To operate one (1) miscellaneous hazardous waste treatment unit, to be located in the TOB, described in Figures I.D.1-3 and I.D.12-22, Appendix II.B.1 and Part II, Section I of the permit application dated September 22, 1997 and revised Dec 10, 1999. The unit will be comprised of the Perma-Fix® I (PF-I) and Perma-Fix® II (PF-II) treatment processes for mixed waste only. The PF-I process consists of stabilization, fixation, and oxidizer deactivation type treatments, conducted primarily in 55-gallon drums. The PF-II process consists of thermal desorption and/or chemical oxidation batch treatments of 110-gallons or less. Both PF-I and PF-II processes will be conducted within the Quonset Hut that is located within the 6" x 6" concrete curbing of the TOB. Exhaust and fugitive emissions from treatment operations within the Quonset Hut will be contained and treated by thermal oxidation.

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3. To operate one (1) miscellaneous hazardous waste treatment unit for hazardous radioactive mixed waste debris treatment, to be located in the Liquid Scintillation Vials (LSV) Processing Area, described in Figures I.D.7, I.D.9 and I.D.11.4 and Appendix A, Part I of the revised permit application dated December 10, 1999. The unit will be comprised of an approximately 700-gallon stainless steel vat, equipped with an emission control hood. The unit will be located within the 5 3/4" x 6" concrete curbing of the LSV Processing area of the Non-hazardous Waste Storage Warehouse (LPW). Exhaust and fugitive emissions from debris treatment operations within the LSV area will be contained and treated by thermal oxidation.
4. To operate a container storage area, located in the Processing and Storage Building (PSB), described in Figure I.D.4 and Part II, Sections B of the permit application dated September 22, 1997 and revised in response to facility comments dated February 22, 2002, and in **Attachment C** of this permit. The PSB container storage area contains three (3) zones for storage of hazardous waste in containers ranging from 1/2-gallon to 55-gallon drums and other D.O.T. approved containers of 550 gallons or less. The permit authorizes the storage of a maximum volume of 72,105 gallons of hazardous waste in the PSB storage area. The storage area is covered and has a containment system consisting of 2.5" x 8" concrete curbing with two sumps to prevent both run-on and run-off. The hazardous waste codes for the waste stored in this area are listed in **Attachment A** of this permit. The facility is also conducting fuel-blending operations including phase separation treatment in this area, as described Attachment I.D.1, Page 6 of the revised permit application dated December 10, 1999.
5. To operate a 3,000-gallon horizontal, aboveground storage tank described in Figure I.D.4 and Part II, Sections C of the revised permit application dated December 10, 1999 and in **Attachment C** of this permit. The storage tank is used for the accumulation and storage of radioactive mixed waste containing ethanol, toluene and xylene, that is generated from the LSV process. This tank is located within secondary containment inside the PSB.
6. HSWA Corrective Action: Forty-four Solid Waste Management Units (SWMUs), eleven sub-units, and three Areas of Concern (AOCs) have been identified at the facility in the RCRA Facility Assessment dated February 22, 1990 and amended on March 15, 2002. AOC A and AOC C are required to complete confirmatory sampling.

The State of Florida received authorization from EPA for implementing HSWA Corrective Action Program on November 17, 2000. This permit incorporates corrective action, including HSWA Corrective Action requirements and constitutes a full permit for Perma-Fix Environmental Services, Inc. under the Resource Conservation and Recovery Act (RCRA).

The Permittee, pursuant to this permit, is 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 unit and to take appropriate corrective action for any such releases.

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 264.10, the requirements of this RCRA permit extend to all contiguous property under the control of the Permittee (see **Attachment A**) 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 conducts transfer facility operations for used oil that is regulated under 62-710, F.A.C. and 40 CFR 279. The facility also operates a mercury-containing lamps and devices transfer facility, in accordance with 62-737, F.A.C. Both transfer operations are located in the LSV Warehouse, shown in Figure I.B.2 of the permit application dated September 22, 1997 in **Attachment D** of this permit.

A chain link fence surrounds the facility, and gates are locked after normal working hours. The facility is described in Figure I.B.2 and photographs in Attachment I.B.1 of the permit application dated September 22, 1997 and in **Attachment B** of this permit. The facility is located at Perma-Fix Environmental Services, 1940 NW 67<sup>th</sup> Place, Gainesville, Florida.

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

1. Interim RCRA Facility Assessment of the Quadrex HPS, Inc. Facility, Gainesville, Florida, dated February 22, 1990.
2. Perma-Fix of Florida Part B Permit Application and Renewal; Rev. 4 – Final, dated November 12, 1999.
3. RCRA Permit Modification Request, dated June 22, 2001.
4. First Notice of Deficiency, dated August 31, 2001.
5. Response to First Notice of Deficiency, dated October 15, 2001.
6. Operating Permit Modification Draft, dated January 24, 2002.
7. Operating Permit Modification for Waste Codes and PSB Drawing, dated February 21, 2002.
8. Supplemental RCRA Facility Assessment of the Perma-Fix of Florida, Inc. Facility, dated March 2002.

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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 hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the Permittee, its agents, employees, servants, or representatives.
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. Nor 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 does not constitute 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 at all times 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, access to the premises, at reasonable times, when the permitted activity is located or conducted for the purpose of:
  - a. Having access to and copy any records that must be kept under conditions of the permit;
  - b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

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- c. Sampling or monitoring any substances or parameters at any location reasonable necessary to assure compliance with this permit or Department rules.

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 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 Florida Administrative Code Rules 62-4.120 and 62-730.300, as applicable. The Permittee shall be liable for any non-compliance of the permitted activity until the Department approves the transfer.
12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction, operation, or closure.
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.

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14. The Permittee shall comply with the following monitoring and record keeping requirements:
  - 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 retain 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. The following conditions also shall apply to a hazardous waste facility permit.
  - a. The following reports shall be submitted to the Department:
    - (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.
    - (3). Biennial report. A biennial report covering facility activities during the previous calendar year shall be submitted by March 1 of each even numbered year pursuant to Chapter 62-730, F.A.C.

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- b. 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.
  - c. 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.
  - d. 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.
  - e. 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."
17. 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 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.



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- 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.

## **SPECIFIC CONDITIONS**

### **PART I – STANDARD REQUIREMENTS**

1. 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.
2. All documents modifying the approved Closure and/or Post-Closure Plan submitted to the Department for review shall be signed, sealed, and certified by a Professional Engineer registered in the State of Florida, in accordance with Chapter 471, F.S. and Rule 62-730.220(7), F.A.C.
3. All submittals modifying major engineering features of the hazardous waste storage areas shall be signed, sealed and certified by a qualified Professional Engineer registered in the State of Florida in accordance with Chapter 471, F.S. and Rule 62-730.220(7), F.A.C. All submittals incorporating interpretations of geological data shall be signed and sealed by a Professional Geologist or Engineer registered in the State of Florida in accordance with Chapter 492, F.S., and Rule 62-730.220(8), F.A.C.
4. The Permittee shall maintain compliance with 40 CFR Part 264, Subpart H - Financial Requirements and Rule 62-730.180(7), F.A.C. All submittals in response to this Specific Condition shall be submitted to:

Financial Officer  
Hazardous Waste Regulation Section, MS # 4560  
Department of Environmental Protection  
Bureau of Solid and Hazardous Waste  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

In the event a cost estimate for closure, postclosure, or corrective action increases, the financial instrument must be updated accordingly. Pursuant to 40 CFR Part 264 Subpart H and associated financial instruments, facilities using a trust fund, letter of credit, financial guarantee bond, performance bond, or closure insurance must increase the amount covered by the instrument within 60 days of the estimate increase. Those facilities using a financial test must cover the estimate increase in the next scheduled submittal. If the estimate increase causes the inability of facility to provide financial assurance through their currently selected mechanism, alternate financial assurance must be provided within 30 days. The Permittee shall provide assurances of financial responsibility for completion of off-site corrective action, if required, in accordance with Rule 62-730.180(7), F.A.C.

5. Three (3) copies of submittals in response to this permit, except Specific Condition 4 of this part, shall be submitted to the following:

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- a. One (1) copy shall be sent to:

Hazardous Waste Supervisor  
Department of Environmental Protection  
Suite 200 B  
7825 Baymeadows Way  
Jacksonville, Florida 32256-7590

- b. Two (2) copies shall be sent to:

Environmental Administrator  
Hazardous Waste Regulation Section  
MS # 4560  
Bureau of Solid and Hazardous Waste  
Department of Environmental Protection  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

- c. One (1) copy 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 30303-310

6. The permittee shall revise "Part I - General" of the Application for a Hazardous Waste Facility Permit (Rule 62-730.900(2), F.A.C.) within thirty (30) days of any changes in Part I. The revised "Part I - General" must be submitted to the Department within thirty (30) days of such changes with the appropriate fees as specified in Chapter Rule 62-4, F.A.C.
7. The Department may modify, revoke and reissue, or terminate for cause, this permit in accordance with the provisions of Rule 62-730.290, F.A.C. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition. The permittee may submit any subsequent revisions to the Department for approval. Should these revisions constitute a major modification to the permit, the permittee shall meet the requirements of Rule 62-730.290, F.A.C. and the fee requirements of 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 5 of this Part.

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8. 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 closure or 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 closure or postclosure and termination of all corrective action, the Permittee must reapply for a closure or postclosure permit in accordance with Rule 62-730.900(2), F.A.C.

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

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 5 of this Part.

9. 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 (Jacksonville).
10. 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.
11. Before transferring ownership or operation of this facility during the operating, closure or postclosure 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.
12. The Permittee shall comply with the security provisions of 40 CFR 264.14 and the site security provisions of the permit application. This site is a suspected or confirmed contaminated site where there may be a risk of exposure to the public, and therefore, the Permittee must comply with the warning sign requirements of Section 403.7255, F.S., and Rule 62-730.181(3), F.A.C.
- a. Warning signs at all entrances and other access points shall be at least 2 feet by 2 feet, made of a durable weather resistant material, with a white background and red lettering of a size indicated as follows:

2" Letters

**WARNING!**  
**NO TRESPASSING**

1" Letters

**CONTAMINATED AREA**  
**AVOID CONTACT WITH**  
**SOIL AND WATER**

1" Letters

**FOR INFORMATION**  
**(904)807-3300**

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- b. Warning signs shall be unobstructed and mounted in such a manner that the center of the sign is approximately 56 inches above ground surface and is capable of being seen from at least 75 feet away.
  - c. The Permittee is responsible for supplying, installing and maintaining the warning signs.
13. The Permittee shall visually inspect the facility emergency and safety equipment in accordance with 40 CFR 264.15 and Part II.A, Section A4d of the permit application dated November 12, 1999. The Permittee shall remedy any deterioration or malfunction discovered by an inspection, in accordance with the requirements of 40 CFR 264.15(c). A schedule for the inspection of the facility emergency and safety equipment must be maintained as the operating record of the facility. Changes, additions, or deletions to the schedule must be approved in writing by the Department.
14. The contingency plan must be reviewed periodically and immediately amended and distributed to the appropriate agencies if any criteria in 40 CFR 264.54 are met. Amendments to the plan must be approved in writing by the Department.
15. 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;
  - 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 and the Bureau of Water and On-site Sewage Programs in Tallahassee at (850) 414-2889. 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.
16. The Maximum Contaminant Levels, Groundwater Protection Standards, Residential Soil Cleanup Goals, Leachability Soil Cleanup Goals and Groundwater Target Cleanup Levels contained in this

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permit are to be used over the life of this permit, unless otherwise modified by the Department in writing.

17. The conditions in this permit shall take precedence over the permit application documents where there are differences between these documents and the permit conditions.
18. As a generator of hazardous waste, the Permittee shall retain a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation produced pursuant to 40 CFR Part 268 for at least three years from the date that the waste which is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal, or until corrective action is completed, whichever date is later. These periods may be extended by request of the Department at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.
19. 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, and 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.
20. Written 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.
21. The Permittee may claim confidential any information required to be submitted by this permit in accordance with Rule 62-730.310, F.A.C.

## **PART II - FACILITY OPERATION**

1. The Permittee shall maintain and operate the facility to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water, which could threaten human health or the environment, in accordance with 40 CFR 264.31.
2. The Permittee shall inform the generator, in writing that the Permittee has the appropriate permits for, and will accept, the waste the generator is shipping, when receiving hazardous waste from an off-site source (except when the Permittee is also the generator). The Permittee must keep a copy of this written notice as part of the operating record (See Specific Condition 13, Part II). [40 CFR 264.12(b)]
3. Prior to acceptance of hazardous wastes other than those specified in Attachment A of the permit, the Permittee shall submit to the Department for approval, a request for permit modification. This request shall include a complete waste analysis of the proposed new waste stream. This analysis must

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be incorporated into the general waste analysis plan and retained on-site. The Permittee shall not accept a new waste stream until the permit has been modified by the Department [40 CFR 264.15]

4. The Permittee shall follow the procedures described in the waste analysis plan, Attachment II.A.4 of the permit application. [40 CFR 264.13(b)]
5. The Permittee shall maintain and comply with the security provisions described in Section II.A.4 of the permit application and as required by 40 CFR 264.14(b)(2) and (c).
6. The Permittee shall inspect all operational equipment, waste storage areas and emergency and safety equipment in accordance with the schedules in Section II.A.4d; Attachment II.B.4, Appendix II.C.E, Attachment II.I.2 and Section II.R.&S. of the permit application. The Permittee shall remedy any deterioration or malfunction discovered by an inspection, in accordance with the requirements of 40 CFR 264.15(c). The Department must approve changes, additions, or deletions to the schedule in writing. The inspection and maintenance records must be maintained as part of the operating record of the facility. [40 CFR 264.15]
7. Facility personnel shall successfully complete the approved training program indicated in Attachment II.A.3 of the permit application within 6 months of employment or assignment to the facility or to a new position at the facility. Verification of this training must be kept with the personnel training records and maintained on-site. Personnel shall not work unsupervised until training has been completed. The training plan must be reviewed by facility personnel at least annually. The Permittee shall maintain on site an updated list of personnel who handle hazardous waste and their respective job titles and job descriptions. [40 CFR 264.16]
8. The Permittee shall comply with the general requirements of 40 CFR 264.17(a) and (b), and the special requirements of 40 CFR 264.176 and 40 CFR 264.198 for ignitable, reactive or incompatible wastes.
9. The Permittee shall comply with the location requirements of 40 CFR 264.18 and 403.7211, F.S.
10. The Permittee shall comply with the following conditions concerning preparedness and prevention:
  - a. At a minimum, the Permittee shall equip the facility with the equipment described in the contingency plan, Attachment CP-5 of the permit application, as required by 40 CFR 264.32.
  - b. The Permittee shall test and maintain the equipment specified in Condition 10(a) of this part as necessary to ensure its proper operation in time of emergency, as required by 40 CFR 264.33.
  - c. The Permittee shall maintain access to the communications or alarm system, as required by 40 CFR 264.34.
  - d. At a minimum, the Permittee shall maintain aisle space as indicated on Page 8-9, Section II.A of the permit application, as required by 40 CFR 264.35.
  - e. The Permittee shall maintain arrangements with state and local authorities, as required by 40 CFR 264.37. If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

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11. The Permittee shall comply with the following conditions concerning the contingency plan:
  - a. The Permittee shall immediately carry out the provisions of the contingency plan, Attachment II.A.2 of the permit application, and follow the emergency procedures described by 40 CFR 264.56, whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which threatens or could threaten human health or the environment. The Permittee shall give proper notification if an emergency situation arises and within five (5) days must submit to the Department a written report which includes all information required in 40 CFR 264.56(j).
  - b. The Permittee shall comply with the requirements of 40 CFR 264.53 concerning copies of the contingency plan.
  - c. Within seven (7) days of meeting any criteria listed in 40 CFR 264.54(a), (b), and (c), the Permittee shall amend the plan and submit the amended plan for the Department approval. Any other changes to the plan must be submitted to the Department within seven (7) days of the plan amendment. All amended plans must be distributed to the appropriate agencies.
  - d. The Permittee shall comply with the requirements of 40 CFR 264.55, concerning the emergency coordinator.
  - e. The Department of Environmental Protection's 24-hour emergency telephone number is (800) 320-0519 or (850) 413-9911. During normal business hours, the Department's Northeast District office may be contacted at (904) 448-4320.
12. The Permittee shall comply with the manifest requirements of 40 CFR 264.71, 264.72, and 264.76.
13. The Permittee shall maintain a written operating record at the facility, which includes:
  - a. the description and quantity of each hazardous waste received;
  - b. the location and quantity of each hazardous waste within the facility;
  - c. VOC concentration for waste stored in the TOB;
  - d. incident reports including date, time, quantity, list of constituents, and summary for incidents involving releases to the atmosphere from the thermal oxidation unit, when treatment efficiency is less than 95%;
  - e. operational monitoring data (temperature, pressure, efficiency, etc.) for the components of the miscellaneous treatment units quarterly report;
  - f. monitoring and test data for Subpart AA, BB, and CC requirements;
  - g. summary report and details of incidents that require implementation of the contingency plan;
  - h. manifest numbers;

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- i. notices to generators as specified in 40 CFR 264.12(b);
- j. the results of inspections (for 3 years);
- k. annual certification of waste minimization;
- l. the closure plan and cost estimates;
- m. biennial reports;
- n. container tracking report for miscellaneous units (Quonset Hut and debris treatment); and
- o. facility inspection, maintenance, repair and equipment replacement reports.

These records must be maintained at the facility until completion of closure and the certification of closure has been accepted by the Department. [40 CFR 264.73]

- 14. 40 CFR Part 268 identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances which an otherwise prohibited waste may continue to be placed on or in a land treatment, storage or disposal unit. The Permittee shall comply with the requirements of 40 CFR Part 268. If the Permittee applies 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.
- 15. A restricted waste identified in 40 CFR 268 Subpart C shall 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.
- 16. 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.
- 17. The Permittee shall construct and install additional equipment and improvements to the treatment and storage unit(s), including fire suppressor systems and two-hour firewalls that will enhance the safety and reduce hazards at the facility. [403.721(2), F.S. and 40 CFR 264.31.]

### **PART III – MISCELLANEOUS TREATMENT UNITS**

- 1. The Permittee shall conduct the Perma-Fix<sup>®</sup> I (PF-I) and Perma-Fix<sup>®</sup> II (PF-II) process treatment in accordance with specifications and procedures described in Attachment II.B.1 and Section II.I of the revised Permit Application.
- 2. The Permittee shall treat in the PF-II process only hazardous radioactive mixed waste (RMW). The permittee shall not treat in the PF-II process more than 3000 pounds RMW, on any single day. The maximum quantity of RMW treated in any single batch shall not exceed 110-gallons.
- 3. The Permittee shall not treat waste with chloride concentrations greater than 500 ppm, or allow that waste to come in contact with the PF-II equipment.



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4. The Permittee is allowed to treat, in the PF-II process, only sludges and solids contaminated with the volatile organic hazardous constituents and at the maximum concentrations, listed in revised Table 1a, dated October 18, 1999, in the Air Toxic Modeling Report of the revised Permit Application. The waste codes permitted for treatment are listed on Page 1, Section II.I of the revised Permit Application and Attachment A of the Permit.
5. The Permittee shall only conduct hazardous debris treatment, as described in Attachment I.D.1, Page 9 and Appendix A, Part I of the revised Permit Application, in the hazardous debris vat unit located inside the LSV Processing area. Also, the Permittee shall capture all solids and liquid residuals generated from the debris treatment activities inside the primary containment vat unit and manage them as described in Appendix A, Attachment I.D.1 of the revised Permit Application and in accordance with Specific Condition 11., Part III of the Permit
6. The Permittee is allowed to treat, in the hazardous debris vat unit, only hazardous debris with the waste codes listed in Attachment A of the permit and that are specified in 40 CFR 268.45 – Table 1. Also, the extent of treatment shall be limited to achieve compliance with 40 CFR 268.45.
7. The Permittee shall not conduct hazardous debris treatment with any equipment that the facility uses in the LSV Process. Furthermore, the Permittee shall not commingle any liquid or solid waste from the LSV Process into or from the hazardous debris unit.
8. The Permittee shall comply with waste compatibility requirements of 40 CFR 264.17(b).
9. All treatment of the hazardous waste shall be conducted by qualified trained personnel, experienced in handling such material. [40 CFR 264.16]
10. The Permittee shall verify and record in the operating records, that the Air Emission Control System (AECS) is engaged and operating properly prior to performing any hazardous waste or hazardous debris treatment activities, including opening, loading or unloading waste containers. Additionally, the Permittee shall verify and record in the operating records that the Quonset Hut is under negative pressure prior to performing PF-I or PF-II treatment. The AECS shall remain in operation and the primary chamber temperature be maintained at 1300°F to 1500°F until the treatment activities are completed, all waste residue are removed from equipment components, treated waste residues are placed in closed containers and the treatment unit(s) are decontaminated.
11. The Permittee shall remove treated waste and other residues from the treatment unit(s) and ancillary equipment, and decontaminate the equipment, in accordance with the decontamination procedures described in “Process Residuals Management”, Page 6, Section II.I of the revised Permit Application.
12. The Permittee shall not store more than ten (10) 55-gallon drums of treated or untreated waste in the Quonset Hut at any time, as listed in Attachment II.I.4, Section II.I of the revised Permit Application. The Permittee shall remove all treated waste and treatment residues from the Quonset Hut and hazardous debris unit areas within twenty-four (24) hours of completion of the treatment event. Furthermore, staging of waste containers for treatment in the Quonset Hut or hazardous debris unit area will be limited to twenty-four (24) hours prior to beginning treatment. The Permittee shall not store any waste in the treatment unit areas for a period greater than Forty-eight (48) hours, including treatment time.

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13. The Permittee shall maintain a written log for tracking the date, time and number of all waste containers being transferred in and out of the Quonset Hut or hazardous debris unit areas and shall record this information in the facility operating record.
14. The Permittee shall provide adequate fire protection to ensure confinement and control of any fire resulting from operation, as specified in the Contingency Agency Plan, Attachment II.A.2, Section 4.1.4.1, Page 5 of the revised Permit Application.
15. The Permittee, at all times, shall maintain compliance with the environmental performance standards listed in 40 CFR 264.601.
16. The Permittee shall maintain an operations log describing treatment activities for PF-I, PF-II and Debris treatment processes. The operations log shall be kept as part of the operating records and shall include the following information:
  - a. Description and quantity of each hazardous waste received and treated at the unit(s) and dates of treatment;
  - b. Concentration of chlorides and of volatile organic hazardous constituents for each waste stream, pursuant to the Specific Conditions 3. and 4. of this part;
  - c. Evaluation of each hazardous waste received and treated in the unit(s), as referenced in Figures I.D.11.1 – 11.4 of the revised Permit Application;
  - d. Location of each hazardous waste within the accumulation areas (material storage buildings as shown in Attachment C of this Permit) and quantity at each location at the end of the reporting period;
  - e. Summary reports and details of all incidents that require implementation of the contingency plan at the unit(s);
  - f. List of personnel present at each event;
  - g. Operating conditions of Air Emission Control System including flowrate, pressure, temperature and operating efficiency during each treatment event;
  - h. Decontamination procedures for treatment unit(s) and ancillary equipment for each treatment event or an explanation why decontamination procedures were not conducted;
  - i. Copies of manifests showing disposition of treatment residues and/or the quantity of treatment residues on-site at the end of the reporting period; and
  - j. Details of any problems discovered during inspections conducted pursuant the Specific Conditions 17. and 18. of this part and details of remedial actions taken.
17. The Permittee shall conduct internal inspections of the PF-II reactor vessel, condenser and accumulator tank, as specified in Attachment II.I.2, Section II.I of the revised Permit Application.

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The Permittee shall also inspect and test the thermal oxidizer and calibrate the temperature in the primary chamber at least every twelve months.

18. The Permittee shall conduct inspections of the miscellaneous unit(s), on each day treatment is conducted and weekly when the unit is not in operation, in accordance with Attachment II.I.2, Section II.I of the revised Permit Application. If, in spite of the daily inspections, a significant deterioration of the concrete pad, joint sealant material or protective coating (due to accidental spills) is noted, the Permittee shall re-evaluate the need for a more resistant protective coating or seal material. All the inspection reports including corrective actions must be recorded and kept as part of the operating records. [40 CFR 264.15]
19. The Permittee shall implement appropriate remedial actions for the problems discovered during the inspections conducted pursuant to the Specific Condition 17. and 18. of this part. For problems that cannot be remediated within forty-eight (48) hours, the Permittee shall notify the Department within three (3) working days and follow up with a written report within fourteen (14) days of discovering such problems. The report must include descriptions of the remedial actions taken. The Permittee shall cease operation of the treatment unit until completion of the necessary repairs.
20. The Permittee shall provide a written report to the Department within thirty (30) days of removing any component of the treatment unit or ancillary equipment from service and shall include a description of the decontamination procedures. The Permittee shall follow the closure plan, Section II.K of the permit application, for the decontamination procedures.

#### **PART IV - CONTAINER STORAGE AREAS/UNITS**

1. The Permittee is allowed to store the wastes listed in Attachment A of the permit only in the Processing and Storage Building (PSB) and Treatment and Operations Building (TOB). Containers must conform to DOT requirements and be managed in accordance with the approved operation plan. If a container holding hazardous waste is not in good condition, or begins to leak, the waste shall be transferred to another container that is in good condition [40 CFR 264.171]. Containers shall be kept closed, except when adding or removing waste and be handled in a manner that will not allow the containers to rupture or leak [40 CFR 264.173].
2. The Permittee shall not store any hazardous waste, which is not listed in Specific Condition 1, Part IV, non-hazardous waste, or raw materials/products in the permitted container storage areas.
3. The Permittee shall store only RMW in the TOB. Additionally, the Permittee shall not store in the TOB any RMW with concentrations of greater than 25% total VOCs that shall include the following constituent specific limitations: 15% of Perchloroethylene; 5% of 1,1,2-trichloroethane; 3% of 2-nitropropane.
4. The Permittee shall use only those containers made of or lined with materials which will not react with and are otherwise compatible with the waste to be stored in them as indicated in Section B.4.b., Part II of the permit application [40 CFR 264.172].
5. The Permittee shall conduct daily visual inspections, in accordance with Figure I-1, Tables II.B-3 and II.B-8, Section B, Part II of the permit application, to detect leakage in the hazardous waste areas or their associated loading/unloading zones [40 CFR 264.174]. If, in spite of the daily inspections, a

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significant deterioration of the concrete pad or joint sealant material is noted, the Permittee shall re-evaluate the need for a protective coating/more resistant seal material.

6. The Permittee shall remove spilled or leaked waste and accumulated precipitation from the secondary containment areas within 24 hours of discovery, then analyze and dispose of the waste in accordance with Section B.1.b(5), Part II of the permit application, per the requirements of 40 CFR 264.175.
7. The Permittee shall comply with the waste compatibility requirements of 40 CFR 264.177 as indicated in Attachment Q, Part II of the permit application.
8. The Permittee shall comply with the following conditions concerning operation of the PSB and TOB container storage areas:
  - a. The Permittee shall maintain and operate the facility as required by 40 CFR 264.175 and in accordance with Section B, Part II of the permit application.
  - b. The Permittee shall store a maximum of 72,105 gallons of waste in containers and in sizes ranging from ½ gallon to fifty-five gallons or other D.O.T. approved containers of 550 gallons or less, in the PSB storage area as shown in Figure I.D.4 of the revised permit application dated December 10, 1999.
  - c. The Permittee shall notify the Department when the volume of waste in the PSB storage area reaches ninety-five percent of the permitted capacity, i.e. 68,500 gallons.
  - d. The Permittee shall store a maximum of 35,200 gallons of waste in containers in sizes ranging from ½ gallon to fifty-five gallons and other D.O.T. approved containers of 550 gallons or less, in the TOB storage area as shown in Figure I.D.1 of the revised permit application dated December 10, 1999. Furthermore, the Permittee shall store in the TOB only the waste that will be treated in the miscellaneous units with the exception of waste codes D001 (oxidizers) and D002 (acids and bases).
  - e. The Permittee shall verify and record in the operating records that all D012 – D043 and F001 – F005 waste, prior to storage in the TOB, does not exceed capacity as listed on Attachment A.
  - f. The Permittee shall notify the Department when the volume of waste in the TOB storage area reaches ninety-five percent of the permitted capacity, i.e. 33,440 gallons.
  - g. The Permittee must place the drums on standard pallets when they are single stacked. The Permittee must use pallets and banding when drums are double stacked.
  - h. For storage of drums larger than fifty-five gallons, the Permittee shall not place more than three (3) drums per pallet and shall not stack them more than two high.
9. The Permittee shall keep all containers and associated equipment used for the fuel blending and phase separation activities inside the secondary containment area of the PSB.
10. All fuel blending and phase separation activities shall be conducted by qualified personnel, experienced in handling such material. [40 CFR 264.16]

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11. The Permittee, upon completion of fuel blending and phase separation activities, shall remove all residues from the fuel blending and phase separation treatment containers and ancillary equipment, and decontaminate the equipment to prevent releases to the atmosphere.
12. The Permittee shall maintain a written log for tracking the date and quantity of all waste processed in the fuel blending and phase separation activities and include quantity of waste solvent transferred out of the LSV 3000-gallon storage tank for use in the fuel blending operation. This information shall be entered in the facility operating record.

#### **PART V - TANKS**

1. The Permittee is allowed to operate one (1) AGT in accordance with the design plans and specifications in Section II.C of the revised Permit Application.
2. The Permittee is authorized to store only radioactive mixed waste, that is generated from the Liquid Scintillation Vials (LSV) process wastes as described in Attachment I.D.1, pages 7-8 of the permit application.
3. The Permittee shall store a maximum of 3,000 gallons of waste in the tank.
4. The Permittee shall notify the Department when the volume of waste stored in the tank reaches ninety-five (95) percent capacity of the tank, i.e., 2,850 gallons.
5. The Permittee shall not place ignitable or reactive waste in the tank system unless the waste is stored in such a way that it is protected from any material or conditions that may cause the waste to ignite or react. [40 CFR 264.198(a)]
6. The Permittee shall comply with the protective distance requirements for the tank placement as set forth in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1996). [40 CFR 264.198(b)]
7. The Permittee shall handle incompatible wastes in accordance with the requirements of 40 CFR 264.199, by not introducing hazardous waste into the tank system, which previously held incompatible waste or material, until the tank system is adequately decontaminated.
8. For new tank components which may be required by the repair options of 40 CFR 264.196(f) and Specific Condition 11, Part III, the Permittee must submit a written assessment, reviewed and certified by an independent professional engineer registered in the State of Florida, which attests to the component's structural integrity. This assessment shall meet the requirements of 40 CFR 264.192. As required in 40 CFR 264.192(b), an independent qualified inspector or independent professional engineer registered in the State of Florida must inspect the installation.
9. The Permittee shall prevent the release of hazardous waste or hazardous constituents to the environment. The secondary containment system shall be maintained according to the Section II.C of the permit application and shall comply with the requirements of 40 CFR 264.193, including the requirements set forth below:

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- a. All new components shall have secondary containment as required by parts (b) and (c) of this condition prior to being placed into service.
  - b. Pursuant to 40 CFR 264.193, the secondary containment system shall be:
    - (1) Maintained to prevent any migration of wastes or accumulated liquid to the soil, groundwater or surface waters;
    - (2) Capable of detecting and collecting releases and run-on until the collected material is removed;
    - (3) Lined with materials compatible with the waste to be stored and have sufficient structural strength to sustain the stresses induced by a failure of the primary containment system as well as other stresses, which may be induced by the environment;
    - (4) Placed on a foundation or base capable of providing support to the secondary containment system;
    - (5) Equipped with leak detection equipment designed and operated to detect failure of either the primary or secondary containment structures or the presence of any release within 24 hours;
    - (6) Sloped or otherwise designed and operated to drain or remove liquids resulting from leaks, spills, or precipitation; and
    - (7) Designed and operated, to contain 100% of the capacity of the largest tank within its boundary and also contain the precipitation due to a 25-year, 24- hour rainfall event, if run-on control is not provided.
  - c. Ancillary equipment shall be provided with secondary containment, except as provided for in 40 CFR 264.193(f).
10. Pursuant to the general operating requirements of 40 CFR 264.194, the Permittee shall:
- a. Not place hazardous wastes in the tank system if the possibility exists that this may cause the tank system to fail;
  - b. Use appropriate controls and practices to prevent spills and overflows;
  - c. Follow the operating procedures described in Pages 7-8 of Attachment I.D.1 and Section II.C of the permit application; and
  - d. Comply with the requirements of 40 CFR 264.196 if a leak or spill occurs.
11. The Permittee shall inspect the tank system in accordance with Paragraph C5 and Appendix E in Section II.C of the permit application, as required by 40 CFR 264.195. The tank inspection procedure shall be maintained in the operating record of the facility.

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12. The Permittee shall follow the procedures outlined in Paragraphs C9 and C11, Section II.C of the permit application and satisfy the requirements of 40 CFR 264.196 when a tank system or secondary containment system produces a leak or spill, or is determined to be unfit for use. As required by 40 CFR 264.196, these requirements shall include following items:
  - a. Cessation of use; prevention of flow or addition of waste;
  - b. Removal of waste from tank system or secondary containment system;
  - c. Containment of visible releases to the environment;
  - d. Notifications, reports;
  - e. Provision of secondary containment, repair or closure; and
  - f. Certification of major repairs.
13. The Permittee shall decontaminate any ancillary equipment including pumps, pipes and valves, within thirty (30) days of removing it from service or if the Permittee fails to repair the ancillary equipment within that time. The decontamination shall be in accordance with the Paragraph K6.3 of the closure plan, Section II.K of the permit application and entered into the facility operating record.
14. The facility shall provide a written report to the Department within forty-five (45) days of removing the AGT unit or ancillary equipment from service and shall include a description of the decontamination procedures.

#### **PART VI – AIR EMISSIONS STANDARDS**

1. The Permittee shall inspect, maintain and operate all the facility and equipment including tanks, pumps, compressors, pressure relief devices, flanges and valves listed in Figure I.D.12, and Attachment II.I.1, Section II.I, of the revised permit application, facility in accordance with 40 CFR 264 - Subpart AA and BB requirements.
2. The Permittee shall complete an Equipment Identification for all equipment listed in Figure I.D.12, and Attachment II.I.1, Section II.I, of the revised permit application. The Permittee shall maintain this log as part of its operating records [40 CFR 264.1064(b)(1)]
3. The Permittee shall operate the facility in accordance with 40 CFR 264 – Subpart CC requirements.
4. The Permittee shall keep, as part of its operating records, results of inspections, monitoring reports, repairs, and other documents required by 40 CFR 264 Subparts AA, BB, and CC for a minimum of three years.

#### **PART VII - CLOSURE**

1. The Permittee shall close the facility as required by 40 CFR 264.111, and in accordance with the closure plan, Section 10 of the permit application.

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2. The Permittee shall keep a copy of the closure plan, Section II.K of the permit application, and all revisions to the closure plan until closure is completed, certified, and the closure certification is accepted by the Department. [40 CFR 264.112(a)(1)]
3. The Permittee shall amend the closure plan in accordance with 40 CFR 264.112(c), whenever necessary.
4. In accordance with 40 CFR 264.112(d)(1), the Permittee shall notify the Department at least forty-five (45) days prior to the date it expects to begin closure of any units.
5. Within ninety (90) days after receiving the final volume of hazardous waste, the Permittee shall treat or remove from the site all hazardous waste in accordance with the schedule specified in the closure plan, Section II.K of the permit application, and in accordance with 40 CFR 264.113(a).
6. The Permittee shall decontaminate and/or dispose of all facility equipment as required by 40 CFR 264.114, 264.178, 264.197, and the closure plan, Section II.K of the permit application.
7. The Permittee shall conduct sampling in accordance with EPA publications 600/4-83-040 "A Characterization of Hazardous Waste Sites - A Method Manual: Volume 2, Available Sampling Methods", and 600/2-80-018, "Samplers and Sampling Procedures for Hazardous Waste Streams". The Permittee shall analyze in accordance with the latest edition of EPA publications SW-846, "Test Methods for Evaluating Solid Waste", and 600/4-82-057, "EPA Methods for Organic Chemical Analysis of Municipal and Industrial Waste".
8. Within sixty (60) days from completion of closure, the Permittee shall submit to the Department by certified mail or hand delivery, a certification signed by both the Permittee and an independent professional engineer, registered in the State of Florida, stating that the facility has been closed in accordance with the permit and specifications in the closure plan, pursuant to the requirements of Rule 62-730.260(6), F.A.C.
9. The Permittee shall provide opportunities for site inspections by informing the Department at least seven (7) days in advance of any physical closure activity.
10. At least one hundred eighty (180) days prior to the date the Permittee expects to begin final closure of the facility, the Permittee shall notify the Department and submit a complete closure permit application. [62-730.260, FAC]
11. Upon implementation for the closure plan, for one or both of the container storage units, if the Permittee determines that all of the contaminated soils cannot be practically removed, the Permittee shall notify the Department within thirty (30) days of such determination. The Permittee shall also submit a permit application to modify the closure permit, to address all post closure care requirements of 40 CFR 264 – Subpart G, within sixty (60) days of the notification. [Rule 62-730.260(3), F.A.C.]
12. Upon implementation of the closure plan, for the tank system or the miscellaneous unit, if all of the contaminated soils can not be practically removed or decontaminated at the time of closure as required by 40 CFR 264.197(a), the Permittee shall notify the Department within thirty (30) days of such determination. The Permittee shall also submit a permit application to modify the closure permit



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to close the tank system or miscellaneous unit, as a landfill and perform postclosure care as required by 40 CFR 264.310. [40 CFR 264.197(b)]

#### **PART VIII -WASTE MINIMIZATION**

1. The Permittee shall comply with 40 CFR 264.73(b)(9) and Section 3005(h) of RCRA, 42 U.S.C. 6925(h), for hazardous waste generated on site, and certify no less often than annually, that:
  - a) the Permittee has a program in place to reduce the volume and toxicity of hazardous waste generated to the degree determined by the Permittee to be economically practicable;
  - b) the proposed method of treatment, storage or disposal is the most practicable method available to the Permittee which minimizes the present and future threat to human health and the environment; and
  - c) the Permittee shall maintain copies of the certification in the facility operation record.
2. The waste minimization program identified in the above Specific Condition shall, at a minimum, address the following elements:
  - a) Senior management support:
    - (1) a dated and signed policy describing management support for waste minimization and for implementation of a waste minimization plan;
    - (2) a description of employee awareness and training program to involve employees in waste minimization planning and implementation to the maximum extent feasible; and
    - (3) a description of how a waste minimization plan has been incorporated into management practices so as to ensure ongoing efforts with respect to product design, capital planning, production operations, and maintenance;
  - b) Characterization of waste generation including identification of types, amounts, and hazardous constituents of waste streams, including the source and date of generation;
  - c) Periodic waste minimization assessments:
    - (1) identification of all points in a process where materials can be prevented from becoming a waste, or can be recycled;
    - (2) identification of potential waste reduction and recycling techniques applicable to each waste, with a cost estimate for capital investment and implementation;
    - (3) description of technically and economically practical waste reduction/recycling options to be implemented, and a planned schedule for implementation; and

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- (4) specific performance goals, preferably quantitative, for the source reduction of each waste stream. Whenever possible, goals should be stated as weight of waste generated per standard unit of production, as defined by the generator.
- d) Cost allocation system:
  - (1) identification of waste management cost for each waste, factoring in liability, transportation, record keeping, personnel, pollution control, treatment, disposal, compliance, and oversight cost to the extent feasible;
  - (2) description of how departments are held accountable for the waste they generate; and
  - (3) comparison of waste management cost with cost of potential reduction and recycling techniques applicable to each waste.
- e) Technology transfer including a description of efforts to seek and exchange technical information on waste minimization from other parts of the company, other firms, trade associations, technical assistance programs, and professional consultants;
- f) Program evaluation:
  - (1) description of types and amounts of hazardous waste reduced or recycled;
  - (2) analysis and quantification of progress made relative to each performance goal established and each reduction technique to be implemented;
  - (3) amendments to waste minimization plan and explanation;
  - (4) explanation and documentation of reduction efforts completed or in progress before development of the waste minimization plan; and
  - (5) explanation and documentation regarding impediments to hazardous waste reduction specific to the individual facility.
- 3. Facilities submitting a Waste Minimization Plan pursuant to Specific Conditions 1.b and 2 of this Part shall, no less often than annually, submit a Waste Minimization Evaluation Report, that includes, at a minimum, the following:
  - a. Description of types and amounts of hazardous waste generated in the past six months.
  - b. Description of types and amounts of hazardous waste eliminated or recycled.
  - c. Analysis and quantification of progress made relative to each performance goal established in accordance to Specific Condition 2(c) of this Part, and each reduction technique to be implemented.

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- d. Amendments to waste minimization plan and identification and description of waste streams and processes that develop during the previous six months, and was not included in the Waste Minimization Plan.
- e. Explanation and documentation regarding impediments to hazardous waste reduction specific to the individual facility.

## **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 confirmatory sampling;
- d. The SWMUs and AOCs identified in Appendix A.4, which require corrective action;
- e. 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.
- f. 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 Permittee shall reimburse the Department for any damages, costs, or expenses,

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including expert and attorneys' fees, that the Department is ordered to pay, or that the Department incurs in connection with its efforts to obtain necessary access to said property. The Permittee shall pay these sums to the Department, or arrange a payment schedule with the Department, within 30 days of demand by the Department. 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.e 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.e of this Part.
4. The Permittee shall prepare and submit to the Department, within ninety (90) calendar days of notification, a SWMU Assessment Report (SAR) for each SWMU identified under Specific Condition 3 of this Part. At a minimum, the SAR shall provide the following information:
  - a. Location of unit(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 unit(s).
  - c. General dimensions, capacities and structural description of unit(s) (supply any available plans/drawings).
  - d. Dates that the unit(s) was operated.
  - e. Specification of all wastes that have been managed at/in the unit(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 unit(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 shall be required to prepare a plan for such investigations as outlined in Specific Conditions HSWA III.2 or HSWA II.2.
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

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discovery. Such newly discovered releases may be from SWMUs or AOCs identified in Specific Condition 1.e of this Part or SWMUs or AOCs identified in Specific Condition 1.e of this Part for which further investigation under Specific Condition 5 of this Part was not required

7. If the Department determines that further investigation of the SWMUs or AOCs is needed, the Permittee shall be required to prepare a plan for such investigations as outlined in Specific Condition HSWA III.2.

## **HSWA PART II – CONFIRMATORY SAMPLING (CS)**

1. Because confirmatory sampling has already been implemented at many of units identified in Specific Condition HSWA I.1.c, the CS requirements shall be interpreted as follows: If a CS Work Plan has not been submitted for a unit, then Specific Condition 2 or 3 of this Part initiates the CS Requirement. If a CS Work Plan has already been submitted for a unit, then Specific Conditions 4 through 7 of this Part govern implementation of the CS requirements for this unit. If a CS Work Plan has already been submitted and approved for a unit, then Specific Conditions 5 through 7 of this Part govern implementation of the CS requirements for this unit. If the CS Report has already been submitted to the Department for review, then Specific Condition 7 of this Part is applicable for this unit.
2. The Permittee shall prepare and submit a Confirmatory Sampling (CS) Work Plan for each unit identified under Specific Condition HSWA I.1.c. The CS Work Plan shall be submitted according to the schedule of compliance outlined in Appendix D. 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.
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. The Department shall specify the start date of the CS Work Plan schedule in the letter approving the CS Work Plan. 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.

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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 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 decision.

### **HSWA PART III - RCRA FACILITY INVESTIGATION (RFI)**

1. The Permittee shall prepare and submit to the Department, within ninety (90) calendar days of the effective date of this permit, a RCRA Facility Investigation (RFI) Work Plan(s) for those units identified in Specific Condition HSWA I.1.a. This Work Plan shall be developed to meet the requirements of Specific Condition 3 of this Part.
2. The Permittee shall prepare and submit to the Department, within ninety (90) calendar days of notification by the Department, an RFI Work Plan for those units identified under Specific Conditions HSWA I.5, HSWA I.7, or HSWA II.6. The RFI Work Plan(s) shall be developed to meet the requirements of Specific Condition 3 of this Part.
3. The RFI Work Plan(s) shall meet the requirements of Appendix B. The RFI Work Plan(s) shall include schedules for 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 unit or a media/pathway associated with a unit (groundwater, surface water, soil, subsurface gas, or air) is not included in the RFI Work Plan(s). Such deletions of a unit, 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).
4. 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). 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,

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- c. conditionally approve the RFI Work Plan and notify the Permittee of the conditions.
5. The Permittee shall implement the RFI(s) in accordance with the approved RFI Work Plan(s) and Appendix B. The Permittee shall notify the Department at least twenty (20) days prior to any sampling activity within the scope of the RFI Work Plan.
6. 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 Conditions 1 through 4 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 thirty (30) 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 4 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, potential threat to human health and/or the environment, and to support a CMS, if necessary.
7. The Permittee shall prepare and submit to the Department, along with the Draft and Final RFI Report(s), Screening Levels for each of the hazardous constituents reported in Specific Condition 6 of this Part. Screening Levels shall be calculated as specified in Appendix E of this permit.
8. The Department will review the RFI Report(s), including the Screening Levels described in Specific Condition 7 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 CMS 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 4 of this Part.
9. 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;

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- 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; and
- i. Copies of daily reports, inspection reports, data, *etc.*

#### **HSWA PART IV – INTERIM MEASURES (IM)**

1. Upon notification by the Department, the Permittee shall prepare and submit an Interim Measures Work Plan for any SWMU or AOC that the Department determines is necessary. IM are necessary in order to minimize or prevent the further migration of contaminants and to limit actual or potential human and environmental exposure to contaminants while long-term corrective action remedies are evaluated and, if necessary, implemented. The IM Work Plan shall be submitted within thirty (30) calendar days of such notification and shall include the elements listed in Specific Condition 2 of this Part. Such interim measures may be conducted concurrently with investigations required under the terms of this permit.
2. The Permittee may initiate IM at a SWMU or AOC by submitting the appropriate notification pursuant to Specific Condition IX.25. 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 2 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 8 and 9 of this Part.
3. 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 are 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.
4. The IM Work Plan imposed under Specific Condition 1 of this Part must be approved by the Department, in writing, prior to implementation. The Department shall specify the start date of the IM Work Plan schedule in the letter approving the IM Work Plan. If the Department disapproves the IM Work Plan, the Department shall either:



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- 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.
5. The Permittee shall implement the interim measures imposed under Specific Condition 1 of this Part in accordance with the approved IM Work Plan.
6. The Permittee shall give notice to the Department as soon as possible of any planned changes, reductions or additions to the IM Work Plan imposed under Specific Condition 1 of this Part or initiated by the Permittee under Specific Condition 2 of this Part.
7. Final approval of corrective action required under 40 CFR 264.101 which is achieved through IM shall be in accordance with Rule 62-730.290, F.A.C. and HSWA Part VI as a permit modification.
8. If the time required for completion of interim measures imposed under Specific Condition 1 of this Part or implemented under Specific Condition 2 of this Part is greater than one year, the Permittee shall provide the Department with progress reports at intervals specified in the approved Work Plan or semi-annually for Permittee-initiated IM. 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;
  - d. Summaries of any problems or potential problems encountered during the reporting period; and
  - e. Projected work for the next reporting period.
9. The Permittee shall prepare and submit to the Department, within ninety (90) calendar days of completion of IM conducted under this Part, an IM Report. The IM Report shall contain the following information at a minimum:
  - a. A description of IM implemented;
  - b. Summaries of results;
  - c. Summaries of all problems encountered;
  - d. Summaries of accomplishments and/or effectiveness of IM; and

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- e. Copies of all relevant laboratory/monitoring data, *etc.* in accordance with the Quality Assurance Project Plan approved by the Department.

#### **HSWA PART V – CORRECTIVE MEASURES STUDY (CMS)**

1. The Permittee shall prepare and submit a CMS Work Plan for those units requiring a CMS within ninety (90) calendar days of notification by the Department that a CMS is required. This CMS Work Plan shall be developed to meet the requirements of Specific Condition 2 of this Part. The Permittee may seek approval from the Department for concurrent RFI/CMS. The CMS may be performed concurrent with the RFI process if the Department determines that sufficient investigative details are available to allow concurrent action.
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 unit deleted from the CMS Work Plan. Such deletion of a unit 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 I.1.f.
3. The Department shall either approve or disapprove, in writing, the CMS Work Plan. 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 from the Department for the CMS Work Plan. Pursuant to Specific Condition 2 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 thirty (30) days of receipt of the Department's final comments on the draft CMS Report. The CMS Report shall

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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 Permit Condition 5 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 6 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**

1. 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.
2. Upon Department approval of the Remedy (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. Within one hundred-twenty (120) calendar days after permit modification for remedy selection, the Permittee shall demonstrate financial assurance for completing the approved remedy in accordance with Rule 62-730.180(6)(d), F.A.C.

#### **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).
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. With Department Approval, the Permittee may also request a change to the Schedule of Compliance in accordance with General Condition 8 of this permit.

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

### **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.

### **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 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.

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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. "Screening 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.
  - f. A "hazardous constituent" for purposes of this permit are those substances listed in 40 CFR Part 261 Appendix VIII and Part 264 Appendix IX.
  - g. "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.

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- h. "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.
- i. 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.
- j. 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 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).
- k. 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.
- l. 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.

### **HSWA PART XIII – 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 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. The CMI Work Plan must be approved by the Department prior to implementation. The Department shall specify the start date of the CMI in the letter approving the Work Plan. If the Department

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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.

4. 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.
5. For corrective measures involving the cleanup of groundwater, the Permittee must demonstrate that the concentration of constituents of concern remain below cleanup goals for three (3) consecutive years after the corrective measures have been terminated.
6. 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.

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## Appendix A

### Solid Waste Management Unit Summary

<b>A.1. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring a RCRA Facility Investigation (RFI):</b>				
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 a RCRA Facility Investigation.				
<del>* Unit Required</del>				
<b>A.2. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time:</b>				
SWMU/AOC No/Letter	SWMU/AOC Name	Unit Comment and Basis for NFA	Dates of Operation	
SWMU 1 **	North Unloading Area			
SWMU 2 **	South Unloading Area			
SWMU 3	Temporary Holding Area			
SWMU 4 *	Processing and Storage Building (PSB)			
SWMU 5 **	Incoming Bulk Waste Transfer Station			
SWMU 6 *	3,000-Gallon Waste Liquids Tank			
SWMU 7	Tanker/Liquids Loading Station			
SWMU 8	Outdoor Staging Area			
SWMU 9	Indoor Staging Area			
<p>* Regulated Unit</p> <p>** Unit identified in RFA dated February 22, 1990, but determined to be no longer in use after Supplemental VSI conducted September 15, 1999.</p>				



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### Solid Waste Management Unit Summary

<b>A.2. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time:</b>			
<b>SWMU/AOC No/Letter</b>	<b>SWMU/AOC Name</b>	<b>Unit Comment and Basis for NFA</b>	<b>Dates of Operation</b>
SWMU 9a	Roller Conveyors		
SWMU 9b **	Lift		
SWMU 9c **	In-Feed Hopper		
SWMU 9d **	Shaker Table		
SWMU 9e **	Crusher/Shredder		
SWMU 9f **	Rinse Basket Trough		
SWMU 9g **	Three Chamber Rinse		
SWMU 9h **	Drain Table		
SWMU 9i	LSF Holding Tanks		
SWMU 9k	Grinder Crusher		
SWMU 9m	Fines Removal System (FRS)		
SWMU 10	Processing Area Ventilation System		
SWMU 11	Carbon Adsorption System		
* Regulated Unit			
** Unit Identified in RFA dated February 22, 1990, but determined to be no longer in use after Supplemental VSI conducted September 15, 1999.			

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### Solid Waste Management Unit Summary

<b>A.2. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time:</b>			
<b>SWMU/AOC No/Letter</b>	<b>SWMU/AOC Name</b>	<b>Unit Comment and Basis for NFA</b>	<b>Dates of Operation</b>
SWMU 12	LSF Pipe		
SWMU 13 **	Packing Material Wastes Drum Holding Area		
SWMU 14	Empty Drums Holding Area		
SWMU 15 **	Crushed Glass/Plastic Vials Drum Holding Area		
SWMU 16	Crushed Vials Final Drainage Station		
SWMU 17 **	Drained Crushed Vials Drum Holding Area		
SWMU 18	Gondolas (10)		
SWMU 19	Dumping Trailers		
SWMU 20	Waste Handling Routes		
SWMU 21	North Retention Pond		
SWMU 22	East Retention Pond		
SWMU 23	North Drainage Ditch		
SWMU 24	East Drainage Ditch		
* Regulated Unit			
** Unit Identified in RFA dated February 22, 1990, but determined to be no longer in use after Supplemental VSI conducted September 15, 1999.			

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### Solid Waste Management Unit Summary

<b>A.2. List of solid waste management units (SWMUs) and areas of concern (AOCs) requiring no further action at this time:</b>			
<b>SWMU/AOC No/Letter</b>	<b>SWMU/AOC Name</b>	<b>Unit Comment and Basis for NFA</b>	<b>Dates of Operation</b>
SWMU 25 **	Former Glass/Plastic Shredder Unit		
SWMU 26 **	Field Trailers Service Area		
SWMU 27 **	PCB Drummed Waste Storage Area		
SWMU 28 **	Freon Distillation Waste Collection Unit		
SWMU 29 **	Sand and Grit Drum Storage Area		
SWMU 30 **	Laboratory Wastes Accumulation Area		
SWMU 31 **	Laboratory Specimens Storage Building		
SWMU 32 **	PCB Decontamination Room		
SWMU 33	Laboratory Buildings		
SWMU 34 *	Treatment and Operations Building (TOB)		
SWMU 35	Liquid Scintillation Vial (LSV) Warehouse		
SWMU 36	East Loading Dock		
SWMU 37	Cloths Washing Room		
<p>* Regulated Unit</p> <p>** Unit identified in RFA dated February 22, 1990, but determined to be no longer in use after Supplemental VSI, September 15, 1999.</p>			

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### Solid Waste Management Unit Summary

#### 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 Name	Unit Comment and Basis for NFA	Dates of Operation
SWMU 38	Treatment Operations Building (TOB) Loading Ramp		
SWMU 39	Freon Distillation Unit		
SWMU 40	North-South Unloading Area		
AOC B	Equipment Laydown and Temporary Storage Area		

~~There are no units identified at this time as requiring no further action.~~

\* Regulated Unit

\*\* Unit Identified in RFA dated February 22, 1990, but determined to be no longer in use after Supplemental VSI conducted September 15, 1999.

#### A.3. 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
AOC A	Spray Paint Booth Area			
AOC B	Print Shop Area			

#### A.4. List of solid waste management units (SWMUs) and areas of concern (AOCs) undergoing Corrective Action (CA):

SWMU/AOC No/Letter	SWMU/AOC Name	Unit Comment and Basis for CA	Dates of Operation	Potentially Affected Media
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There are no units identified at this time as requiring Corrective Action (CA).

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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;
  - (2). Structural geology: description of local and regional structural features (*e.g.*, folding, faulting, tilting, jointing, metamorphic foliation, *etc.*);
  - (3). Depositional history;

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- (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.
- 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;

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



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### 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

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;

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- (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;
  - b. Type of unit/disposal area;
  - c. Design features;
  - d. Operating practices (past and present)
  - e. Period of operation;

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- 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;
  - (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;

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- (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).
- 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,

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- 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 EPA Region 4 Environmental Compliance Branch's **Standard Operating Procedure and Quality Assurance Manual (SOP)** (most recent version) or a Department-approved Quality Assurance Project Plan 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;
  - 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;

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- 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:
  - (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

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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;
- 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);

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- (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.

##### **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



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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.

**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).

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## **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**

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;

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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**

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.

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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**

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

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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 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**

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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.
- (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.



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- (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 <i>HSWA I.5.</i> , or AOCs identified under <i>Specific Condition HSWA I.2.</i> <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 <i>HSWA I.1.a.</i> <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 <i>HSWA I.5</i> , <i>HSWA I.7</i> , or <i>HSWA II.6.</i> <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 <b>General Condition 8.</b>	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
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.  * This applies to Work Plan execution that requires more than one hundred-eighty (180) calendar days  ** This applies to Work Plan execution that requires more than one year.	

## 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:

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- 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  $1 \times 10^{-6}$  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:
  - 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

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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**

- 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.

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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 \_\_\_\_\_

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL PROTECTION

\_\_\_\_\_  
**JOHN M. RUDELL, DIRECTOR**  
**DIVISION OF WASTE MANAGEMENT**

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

\_\_\_\_\_  
CLERK

\_\_\_\_\_  
DATE

This is to certify that this Notice of Permit was mailed before  
close of business on \_\_\_\_\_.

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### **Attachment A**

#### **Permitted Waste Codes for Storage in Processing and Storage Building (PSB)**

D001	D025	P003	U058	U165
D002	D026	P022	U059	U169
D003	D027	P042	U068	U171
D004	D028	P075	U070	U187
D005	D029	P081	U071	U196
D006	D030	U001	U072	U200
D007	D031	U002	U076	U201
D008	D032	U003	U077	U202
D009	D033	U004	U080	U206
D010	D034	U010	U083	U208
D011	D035	U012	U089	U209
D012	D036	U019	U108	U210
D013	D037	U027	U110	U211
D014	D038	U029	U112	U213
D015	D039	U031	U117	U220
D016	D040	U035	U121	U226
D017	D041	U037	U122	U227
D018	D042	U044	U124	U228
D019	D043	U052	U140	U237
D020	F001	U053	U150	U239
D021	F002	U055	U154	U328
D022	F003	U056	U159	U353
D023	F004	U057	U161	U359
D024	F005			

#### **Permitted Waste Codes for Storage in Treatment and Operations Building (TOB)**

D001 (non-flammable oxidizers only)

D002 – D011

D012-D043 and F001-F005 (RMW with concentrations not greater than 25% total VOCs that shall include the following constituent specific limitations: 15% of Perchloroethylene; 5% of 1,1,2-trichloroethane; 3% of 2-nitropropane)

#### **Permitted Waste Codes for Storage in 3000 gallon AGT located inside PSB**

D001, F003, F005 radioactive mixed waste, generated from the LSV process.

#### **Permitted Waste Codes for Treatment in the Perma-Fix II® process located inside TOB**

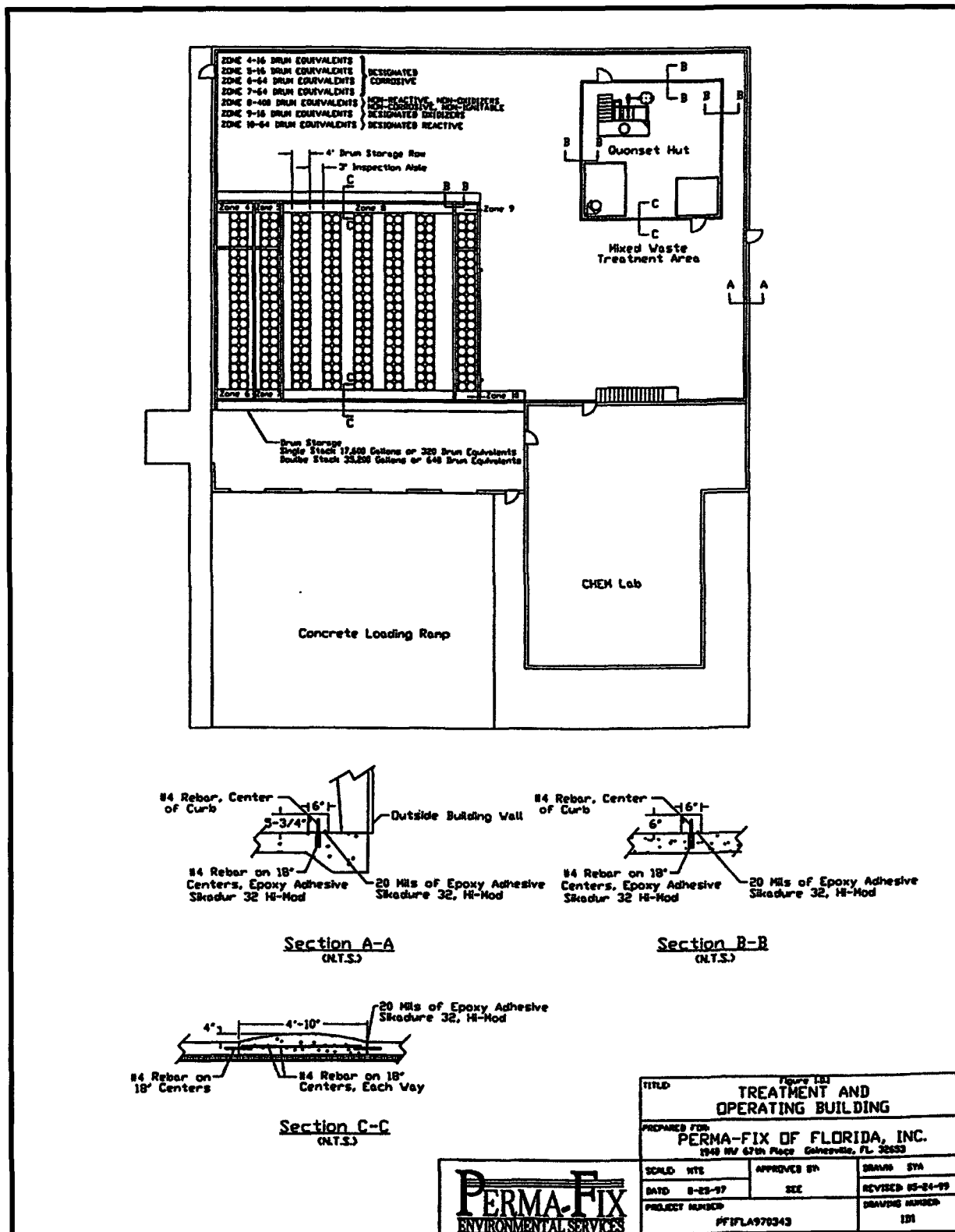
D003-D008, D010, D011, D018, D019, D021, D022, D035, D038-D040, F001-003, F005



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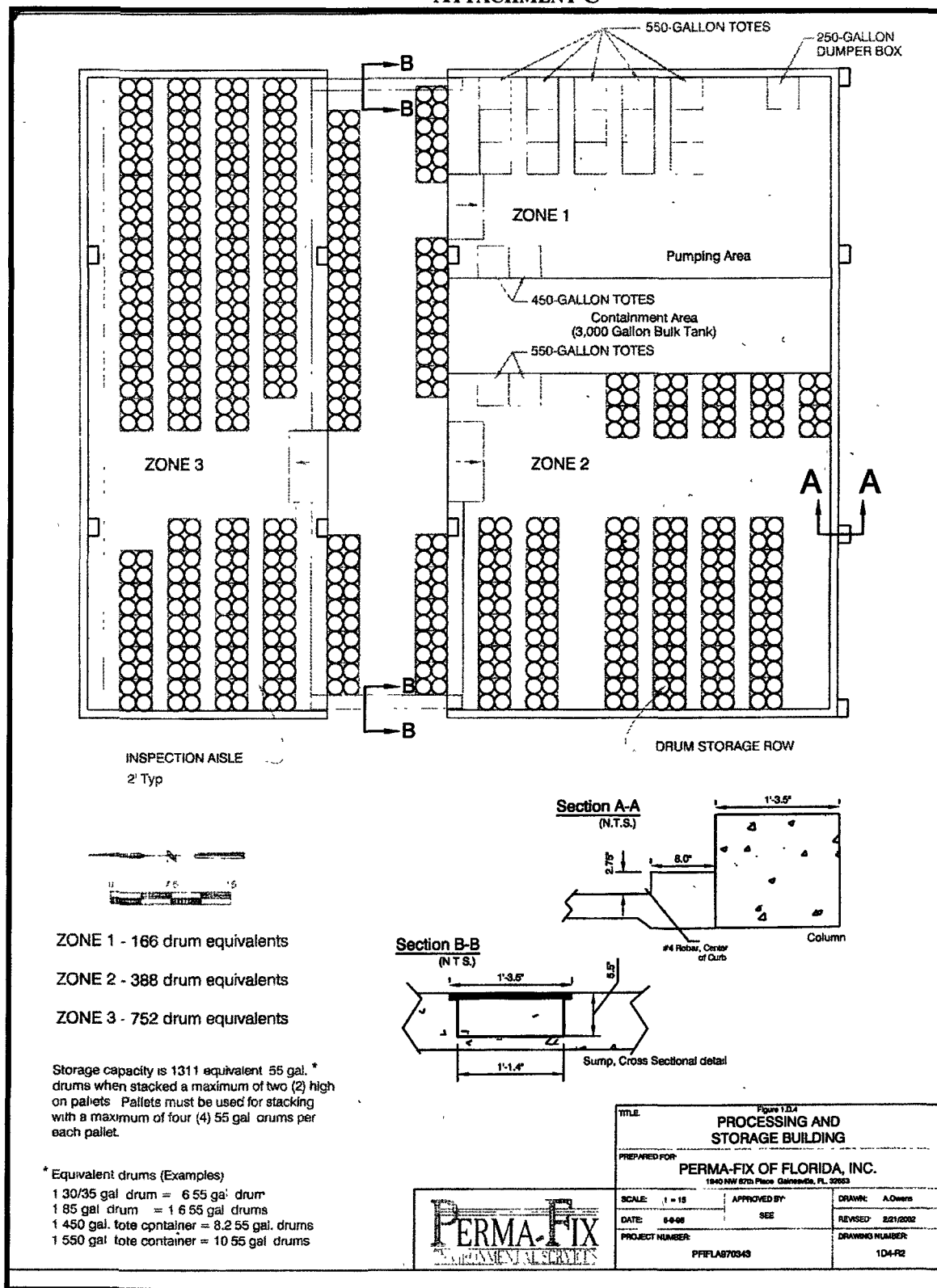
# ATTACHMENT B



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### ATTACHMENT C



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# ATTACHMENT D

