



1501 Omni Way
St. Cloud, Florida 34773

REQUEST FOR MINOR PERMIT MODIFICATION

OPERATION PERMIT

**FDEP Operation Permit Nos. SC49-0199726-004 & SO49-
0199726-005**

DEP ID Number: 89544 (WACS)

J.E.D. SOLID WASTE MANAGEMENT FACILITY

Prepared by:



15450 New Barn Road - Suite 304
Miami Lakes, FL 33014
Phone: (954) 535-1876

December 16, 2009

*Brenda Ann Smith Clark
16 December 2009*

TABLE OF CONTENTS

TRANSMITTAL LETTER

Attachment A: Permit Application DEP Form #62-701.900(1)
Engineering Drawings
Auto Shredder Residual Recycling Plan

Attachment B: Permit Application DEP Form #62701.900(23)
Waste Tire Storage and Processing Plan

Attachment C: Revised Operation Plan



ONE COMPANY | *Many Solutions*

16 December 2009

Mr. Tom Lubozynski P.E.
Florida Department of Environmental Protection
Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Subject: Application for Minor Permit Modification
Recycling of Auto Shredder Residual and Waste Tire Storage and Processing
J.E.D. Solid Waste Management Facility, Osceola County, Florida
WACS ID No. 89544

Dear Mr. Lubozynski:

On behalf of Omni Waste of Osceola County, LLC. (Omni), HDR Engineering, Inc. (HDR) is providing the Florida Department of Environmental Protection (FDEP) with this request for a minor permit modification to allow recycling of auto shredder residual (ASR) and waste tire storage and processing at the J.E.D. Solid Waste Management Facility (JED Facility), located in Osceola County, Florida. The JED Facility is owned and operated by Omni Waste of Osceola County, LLC (Omni), a subsidiary company of Waste Services, Inc. (WSI). This proposed minor modification was discussed during the pre-application meeting on 8 September 2009 with Mr. Mike Kaiser, Vice President of Environmental Management & Engineering, of Waste Services Inc. (WSI).

The JED Facility is a Class I municipal solid waste landfill that is currently operating in accordance with Permit Nos. SC49-0199726-004 & SO49-0199726-005, issued by FDEP and dated March 2007. The remainder of this letter addresses the proposed minor modification.

Proposed Modification

Omni is proposing a minor modification to the Operation Plan to allow ASR recycling and waste tire storage and processing operations at the JED Facility. These proposed operations are described in the Permit Application Forms and Plans presented in Attachments A and B. The ASR recycling operations will be performed within the lined waste disposal area while the waste tire storage and processing operations will be located outside the lined area, but within the future permitted waste disposal boundary. Both of these operations will be performed in accordance with the details described in the Auto Shredder Residual Recycling Plan and Waste Tire Storage and Processing Plan provided in Attachments A and B. The ASR Recycling Plan and Waste Tire Storage and Processing Plan are incorporated into the JED Facility Operation Plan as

HDR Engineering Inc.

15450 New Barn Road
Suite 304
Miami Lakes, FL 33014

Office: (305) 728-7400
Fax: (305) 728-7400
www.hdrinc.com

Appendices F and G, respectively. A revised Operation Plan, incorporating these operations, is presented in Attachment C.

Financial Assurance

The current approved closure cost estimate for the JED Facility is currently being revised to reflect the partial closure project recently completed at the facility and will be submitted to the FDEP under separate cover by Geosyntec Consultants. The costs to close the ASR recycling and waste tire storage and processing operations are both addressed in the revised estimate. To avoid redundancy, the revised closure cost estimate is not included in this request for minor modification.

Conclusion

Should you have any questions regarding the information presented in this request for minor modification, please do not hesitate to contact Mr. Mike Kaiser at 904-673-0446 or the undersigned at 954-535-1242.

Sincerely

Brenda Ann Smith Clark

Brenda Ann Smith Clark, P.E.
Senior Project Manager

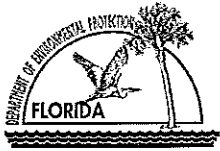
16 December 2009

Attachments

Copy to: Mr. Mike Kaiser, Waste Services, Inc.

ATTACHMENT A

PERMIT APPLICATION FORM
DEP FORM #62-701.900(1)
SOLID WASTE MANAGEMENT FACILITY PERMIT



Florida Department of Environmental Protection
Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, FL 32399-2400

DEP Form # <u>62-701.900(1)</u>
Form Title <u>Solid Waste Management Facility Permit</u>
Effective Date <u>05-27-01</u>
DEP Application No. _____ (Filled by DEP)

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

APPLICATION FOR A PERMIT TO CONSTRUCT,
OPERATE, MODIFY OR CLOSE
A SOLID WASTE MANAGEMENT FACILITY

APPLICATION INSTRUCTIONS AND FORMS

Northwest District
160 Governmental Center
Pensacola, FL 32501-5794
850-595-8360

Northeast District
7825 Baymeadows Way, Ste. B200
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33901-3881
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

INSTRUCTIONS TO APPLY FOR A SOLID WASTE MANAGEMENT FACILITY PERMIT

I. General

Solid Waste Management Facilities shall be permitted pursuant to Section 403.707, Florida Statutes, (FS) and in accordance with Florida Administrative Code (FAC) Chapter 62-701. A minimum of four copies of the application shall be submitted to the Department's District Office having jurisdiction over the facility. The appropriate fee in accordance with Rule 62-701.315, FAC, shall be submitted with the application by check made payable to the Department of Environmental Protection (DEP).

Complete appropriate sections for the type of facility for which application is made. Entries shall be typed or printed in ink. All blanks shall be filled in or marked "not applicable" or "no substantial change". Information provided in support of the application shall be marked "submitted" and the location of this information in the application package indicated. The application shall include all information, drawings, and reports necessary to evaluate the facility. Information required to complete the application is listed on the attached pages of this form.

II. Application Parts Required for Construction and Operation Permits

- A. Landfills and Ash Monofills - Submit parts A,B, D through T
- B. Asbestos Monofills - Submit parts A,B,D,E,F,G,J,L,N, P through S, and T
- C. Industrial Solid Waste Facilities - Submit parts A,B, D through T
- D. Non-Disposal Facilities - Submit parts A,C,D,E,J,N,S and T

NOTE: Portions of some parts may not be applicable.

NOTE: For facilities that have been satisfactorily constructed in accordance with their construction permit, the information required for A,B,C and D type facilities does not have to be resubmitted for an operation permit if the information has not substantially changed during the construction period. The appropriate portion of the form should be marked "no substantial change".

III. Application Parts Required for Closure Permits

- A. Landfills and Ash Monofills - Submit parts A,B,M, O through T
- B. Asbestos Monofills - Submit parts A,B,N, P through T
- C. Industrial Solid Waste Facilities - Submit parts A,B, M through T
- D. Non-Disposal Facilities - Submit parts A,C,N,S and T

NOTE: Portions of some parts may not be applicable.

IV. Permit Renewals

The above information shall be submitted at time of permit renewal in support of the new permit. However, facility information that was submitted to the Department to support the expiring permit, and which is still valid, does not need to be re-submitted for permit renewal. Portions of the application not re-submitted shall be marked "no substantial change" on the application form.

V. Application Codes

S	-	Submitted
LOCATION	-	Physical location of information in application
N/A	-	Not Applicable
N/C	-	No Substantial Change

VI. LISTING OF APPLICATION PARTS

PART A:	GENERAL INFORMATION
PART B:	DISPOSAL FACILITY GENERAL INFORMATION
PART C:	NON-DISPOSAL FACILITY GENERAL INFORMATION
PART D:	PROHIBITIONS
PART E:	SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL
PART F:	LANDFILL PERMIT REQUIREMENTS
PART G:	GENERAL CRITERIA FOR LANDFILLS
PART H:	LANDFILL CONSTRUCTION REQUIREMENTS
PART I:	HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS
PART J:	GEOTECHNICAL INVESTIGATION REQUIREMENTS
PART K:	VERTICAL EXPANSION OF LANDFILLS
PART L:	LANDFILL OPERATION REQUIREMENTS
PART M:	WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS
PART N:	SPECIAL WASTE HANDLING REQUIREMENTS
PART O:	GAS MANAGEMENT SYSTEM REQUIREMENTS
PART P:	LANDFILL CLOSURE REQUIREMENTS
PART Q:	CLOSURE PROCEDURES
PART R:	LONG TERM CARE REQUIREMENTS
PART S:	FINANCIAL RESPONSIBILITY REQUIREMENTS
PART T:	CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
APPLICATION FOR A PERMIT TO CONSTRUCT, OPERATE, MODIFY OR CLOSE
A SOLID WASTE MANAGEMENT FACILITY

Please Type or Print

A. GENERAL INFORMATION

1. Type of facility (check all that apply):

- ☒ Disposal
 ☒ Class I Landfill ☐ Ash Monofill
 ☐ Class II Landfill ☐ Asbestos Monofill
 ☐ Class III Landfill ☐ Industrial Solid Waste
 ☐ Other Describe: _____
- ☐ Non-Disposal
 ☐ Incinerator For Non-biomedical Waste
 ☐ Waste to Energy Without Power Plant Certification
 ☐ Other Describe: _____

NOTE: Waste Processing Facilities should apply on Form 62-701.900(4), FAC;
Land Clearing Disposal Facilities should notify on Form 62-701.900(3), FAC;
Compost Facilities should apply on Form 62-701.900(10), FAC; and
C&D Disposal Facilities should apply on Form 62-701.900(6), FAC

2. Type of application:

- ☐ Construction
☒ Operation
☐ Construction/Operation
☐ Closure

3. Classification of application:

- ☐ New ☐ Substantial Modification
☐ Renewal ☐ Intermediate Modification
 ☒ Minor Modification

4. Facility name: J.E.D. Solid Waste Management Facility

5. DEP ID number: 89544 (WACS) County: Osceola

6. Facility location (main entrance): 1501 Omni Way

St. Cloud, Florida 34773

7. Location coordinates:

Section: 11, 13, 14, 17, 18 Township: 28S Range: 32E, 33E
Latitude: 28 ° 03 ' 32 " Longitude: 81 ° 05 ' 46 "

- (8. Applicant name (operating authority): Omni Waste of Osceola County, LLC (Omni)
Mailing address: 1501 Omni Way, St. Cloud, Florida 34773
Street or P.O. Box City State Zip
Contact person: Mike Kaiser Telephone: (904) 673-0446
Title: Vice President, Environmental Management & Engineering
mkaiser@wasteservicesinc.com
E-Mail address (if available)
9. Authorized agent/Consultant: HDR Engineering, Inc.
Mailing address: 15450 New Barn Road, Suite 304, Miami Lakes, Florida 33014
Street or P.O. Box City State Zip
Contact person: Brenda Ann Smith Clark, P.E. Telephone: (305) 728-7430
Title: Senior Project Manager
brenda.clark@hdrinc.com
E-Mail address (if available)
10. Landowner(if different than applicant): _____
Mailing address: _____
Street or P.O. Box City State Zip
Contact person: _____ Telephone: () _____
E-Mail address (if available)
11. Cities, towns and areas to be served: Osceola County and other
Counties (See Section 2.7.1 of 2006 Solid Waste Renewal Permit Application)
12. Population to be served:
Current: approx. 5.8 million Five-Year Projection: _____
13. Date site will be ready to be inspected for completion: April 30, 2010
14. Expected life of the facility: Phases 1 thru 3: 5 to 6 years remaining years
15. Estimated costs:
Total Construction: \$ \$100,000 Closing Costs: \$ 10.7 million
16. Anticipated construction starting and completion dates:
From: March 1, 2010 To: 30 April 2010
17. Expected volume or weight of waste to be received:
_____ yds³/day 6,000 tons/day _____ gallons/day

B. DISPOSAL FACILITY GENERAL INFORMATION

1. Provide brief description of disposal facility design and operations planned under this application:

This Minor Modification Application is being submitted in support of Auto Shredder Residual Recycling and Waste Tire Storage Processing Operations at the existing permitted Class I municipal solid waste facility.

2. Facility site supervisor: Matt Orr
Title: Site Manager Telephone: (407) 891-3720
morr@wasteservicesinc.com
E-Mail address (if available)
3. Disposal area: Total 264 acres; Used 76 acres; Available 188 acres.
4. Weighing scales used: ☒ Yes ☐ No
5. Security to prevent unauthorized use: ☒ Yes ☐ No
6. Charge for waste received: _____ \$/yds³ 30-40 \$/ton
7. Surrounding land use, zoning:
☐ Residential ☐ Industrial
☒ Agricultural ☐ None
☐ Commercial ☐ Other Describe: _____
8. Types of waste received:
☒ Residential ☒ C & D debris
☒ Commercial ☒ Shredded/cut tires
☒ Incinerator/WTE ash ☐ Yard trash
☒ Treated biomedical ☐ Septic tank
☒ Water treatment sludge ☐ Industrial
☐ Air treatment sludge ☒ Industrial sludge
☐ Agricultural ☒ Domestic sludge
☒ Asbestos
☒ Other Describe: liquid waste, auto shredder residual, waste tires
9. Salvaging permitted: ☐ Yes ☒ No unless volume of recyclable goods is sufficient
10. Attendant: ☒ Yes ☐ No Trained operator: ☒ Yes ☐ No
11. Spotters: Yes ☒ No ☐ Number of spotters used: min 1 per working face
12. Site located in: ☒ Floodplain ☐ Wetlands ☐ Other _____

13. Property recorded as a Disposal Site in County Land Records: ☒ Yes ☐ No
14. Days of operation: Monday through Saturday
15. Hours of operation: Mon to Fri: 6:00 AM to 5:00 PM and Sat: 6:00 AM to 2:00 PM
16. Days Working Face covered: Each Working Day
17. Elevation of water table: 79 Ft. (NGVD 1929)
18. Number of monitoring wells: 63
19. Number of surface monitoring points: 2
20. Gas controls used: ☒ Yes ☐ No Type controls: ☒ Active ☐ Passive
Gas flaring: ☒ Yes ☐ No Gas recovery: ☐ Yes ☒ No
21. Landfill unit liner type:
☐ Natural soils ☐ Double geomembrane
☐ Single clay liner ☐ Geomembrane & composite
☐ Single geomembrane ☒ Double composite (for Cells 1 through 6)
☐ Single composite ☐ None
☐ Slurry wall
☐ Other Describe: Additional GCL below primary geomembrane in sump
22. Leachate collection method:
☒ Collection pipes ☒ Sand layer
☒ Geonets ☐ Gravel layer
☐ Well points ☐ Interceptor trench
☐ Perimeter ditch ☐ None
☐ Other Describe: _____
23. Leachate storage method:
☐ Tanks
☒ Surface impoundments
☐ Other Describe: _____
24. Leachate treatment method:
☐ Oxidation ☐ Chemical treatment
☐ Secondary ☐ Settling
☐ Advanced
☐ None
☒ Other Leachate is aerated

25. Leachate disposal method:

<input checked="" type="checkbox"/> Recirculated	<input type="checkbox"/> Pumped to WWTP
<input checked="" type="checkbox"/> Transported to WWTP	<input type="checkbox"/> Discharged to surface water
<input type="checkbox"/> Injection well	<input type="checkbox"/> Percolation ponds
<input type="checkbox"/> Evaporation	
<input type="checkbox"/> Other _____	

26. For leachate discharged to surface waters:

Name and Class of receiving water: _____ N/A

27. Storm Water:

Collected: ☒ Yes ☐ No

Type of treatment: Dry and wet Retention for landfill, and dry retention for access road

Name and Class of receiving water: Bull Creek, Class III

28. Environmental Resources Permit (ERP) number or status: Current ERP Numbers

are ERP49-0199752-001-EI (Phase 1 Individual), ERP49-0199752-002-EI
(Conceptual), ERP49-0199752-003 (Phase 2 Individual), and
ERP49-0199752-004-EM (Phase 3 Individual).

C. NON-DISPOSAL FACILITY GENERAL INFORMATION

1. Provide brief description of the non-disposal facility design and operations planned under this application:

2. Facility site supervisor: _____

Title: _____ Telephone: (____) _____

Not Applicable

_____ (if available)

3. Site area: Facility _____ acres; Property _____ acres

4. Security to prevent unauthorized use: ☐ Yes ☐ No

5. Site located in: ☐ Floodplain ☐ Wetlands ☐ Other _____

6. Days of operation: _____

7. Hours of operation: _____

8. Number of operating staff: _____

9. Expected useful life: _____ Years

10. Weighing scales used: ☐ Yes ☐ No

11. Normal processing rate: _____ yd³/day _____ tons/day _____ gal/day

12. Maximum processing rate: _____ yd³/day _____ tons/day _____ gal/day

13. Charge for waste received: _____

14. Storm Water Collected: ☐ Yes ☐ No

Type of treatment: _____

Name and Class of receiving water: _____

15. Environmental Resources Permit (ERP) number or status: _____

16. Final residue produced:

_____ % of normal processing rate _____ % of maximum processing rate

_____ Tons/day _____ Tons/day

Disposed of at:

Facility name: _____ County: _____

17. Estimated operating costs: \$ _____

Total cost/ton: \$ _____ Net cost/ton: \$ _____

18. Provide a site plan, at a scale not greater than 200 feet to the inch, which shows the facility location and identifies the proposed waste and final residue storage areas, total acreage of the site, and any other features which are relevant to the prohibitions or location restrictions in Rule 62-701.300, FAC, such as water bodies or wetlands on or within 200 feet of the site, and potable water wells on or within 500 feet of the site.

19. Provide a description of how the waste and final residue will be managed to not be expected to cause violations of the Department's ground water, surface water or air standards or criteria

20. Provide an estimate of the maximum amount of waste and final residue that will be store on-site.

21. Provide a detailed description of the technology use at the facility and the functions of all processing equipment that will be utilized. The descriptions shall explain the flow of waste and residue through all the proposed unit operations and shall include: (1) regular facility operations as they are expected to occur; (2) procedures for start up operations, and scheduled and unscheduled shut down operations; (3) potential safety hazards and control methods, including fire detection and control; (4) a description of any expected air emissions and wastewater discharges from the facility which may be potential pollution sources; (5) a description and usage rate of any chemical or biological additives that will be used in the process; and (6) process flow diagrams for the facility operations. Requested

22. Provide a description of the loading, unloading and processing areas.

23. Provide a description of the leachate control system that will be used to prevent discharge of leachate to the environment and mixing of leachate with stormwater. Note: Ground water monitoring may be required for the facility depending on the method of leachate control used.

24. Provide an operation plan for the facility which includes: (1) a description of general facility operations, the number of personnel responsible for the operations including their respective job descriptions, and the types of equipment that will be used at the facility; (2) procedures to ensure any unauthorized wastes received at the site will be properly managed; (3) a contingency plan to cover operation interruptions and emergencies such as fires, explosions, or natural disasters; (4) procedures to ensure operational records needed for the facility will be adequately prepared and maintained; and (5) procedures to ensure that the wastes and final residue will be managed to not be expected to cause pollution.

25. Provide a closure plan that describes the procedures that will be implemented when the facility closes including: (1) estimated time to complete closure; (2) procedures for removing and properly managing or disposing of all wastes and final residues; (3) notification of the Department upon ceasing operations and completion of final closure.

D. PROHIBITIONS (62-701.300, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
—	—	—	X	1. Provide documentation that each of the siting criteria will be satisfied for the facility; (62-701.300(2), FAC)
—	—	—	X	2. If the facility qualifies for any of the exemptions contained in Rules 62-701.300(12) through (16), FAC, then document this qualification(s).
—	—	—	X	3. Provide documentation that the facility will be in compliance with the burning restrictions; (62-701.300(3), FAC)
—	—	—	X	4. Provide documentation that the facility will be in compliance with the hazardous waste restrictions; (62-701.300(4), FAC)
—	—	—	X	5. Provide documentation that the facility will be in compliance with the PCB disposal restrictions; (62-701.300(5), FAC)
—	—	—	X	6. Provide documentation that the facility will be in compliance with the biomedical waste restrictions; (62-701.300(6), FAC)
—	—	—	X	7. Provide documentation that the facility will be in compliance with the Class I surface water restrictions; (62-701.300(7), FAC)
—	—	—	X	8. Provide documentation that the facility will be in compliance with the special waste for landfills restrictions; (62-701.300(8), FAC)
—	—	—	X	9. Provide documentation that the facility will be in compliance with the special waste for waste-to-energy facilities restrictions; (62-701.300(9), FAC)
—	—	—	X	10. Provide documentation that the facility will be in compliance with the liquid restrictions; (62-701.300(10), FAC)
—	—	—	X	11. Provide documentation that the facility will be in compliance with the used oil restrictions; (62-701.300(11), FAC)

E. SOLID WASTE MANAGEMENT FACILITY PERMIT REQUIREMENTS, GENERAL (62-701.320, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
✓				1. Four copies, at minimum, of the completed application form, all supporting data and reports; (62-701.320(5)(a), FAC)
✓	Attached			2. Engineering and/or professional certification (signature, date and seal) provided on the applications and all engineering plans, reports and supporting information for the application; (62-701.320(6), FAC)
✓	Letter of Transmittal			3. A letter of transmittal to the Department; (62-701.320(7)(a), FAC)
✓	Attached			4. A completed application form dated and signed by the applicant; (62-701.320(7)(b), FAC)
✓	Attached			5. Permit fee specified in Rule 62-701.315, FAC in check or money order, payable to the Department; (62-701.320(7)(c), FAC)
			✓	6. An engineering report addressing the requirements of this rule and with the following format: a cover sheet, text printed on 8 1/2 inch by 11 inch consecutively numbered pages, a table of contents or index, the body of the report and all appendices including an operation plan, contingency plan, illustrative charts and graphs, records or logs of tests and investigations, engineering calculations; (62-701.320(7)(d), FAC)
✓	Attachment C			7. Operation Plan and Closure Plan; (62-701.320(7)(e)1, FAC)
			✓	8. Contingency Plan; (62-701.320(7)(e)2, FAC)
				9. Plans or drawings for the solid waste management facilities in appropriate format (including sheet size restrictions, cover sheet, legends, north arrow, horizontal and vertical scales, elevations referenced to NGVD 1929) showing; (62-702.320(7)(f), FAC)
			✓	a. A regional map or plan with the project location;
			✓	b. A vicinity map or aerial photograph no more than 1 year old;
			✓	c. A site plan showing all property boundaries certified by a registered Florida land surveyor;

S LOCATION N/A N/C

PART E CONTINUED

____ Minor Mod Drawings _____

d. Other necessary details to support the engineering report.

____ _____ _____ X

10. Documentation that the applicant either owns the property or has legal authority from the property owner to use the site; (62-701.320(7)(g), FAC)

____ _____ X _____

11. For facilities owned or operated by a county, provide a description of how, if any, the facilities covered in this application will contribute to the county's achievement of the waste reduction and recycling goals contained in Section 403.706, FS; (62-701.320(7)(h), FAC)

____ _____ X _____

12. Provide a history and description of any enforcement actions taken by the Department against the applicant for violations of applicable statutes, rules, orders or permit conditions relating to the operation of any solid waste management facility in this state; (62-701.320(7)(i), FAC)

____ _____ X _____

13. Proof of publication in a newspaper of general circulation of notice of application for a permit to construct or substantially modify a solid waste management facility; (62-702.320(8), FAC)

____ _____ _____ X

14. Provide a description of how the requirements for airport safety will be achieved including proof of required notices if applicable. If exempt, explain how the exemption applies; (62-701.320(13), FAC)

____ _____ _____ X

15. Explain how the operator training requirements will be satisfied for the facility; (62-701.320(15), FAC)

F. LANDFILL PERMIT REQUIREMENTS (62-701.330, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
_____	_____	_____	<u>X</u>	1. Vicinity map or aerial photograph no more than 1 year old and of appropriate scale showing land use and local zoning within one mile of the landfill and of sufficient scale to show all homes or other structures, water bodies, and roads other significant features of the vicinity. All significant features shall be labeled; (62-701.330(3)(a),FAC)
_____	_____	_____	<u>X</u>	2. Vicinity map or aerial photograph no more than 1 year old showing all airports that are located within five miles of the proposed landfill; (62-701.330(3)(b),FAC)
_____	_____	_____	<u>X</u>	3. Plot plan with a scale not greater than 200 feet to the inch showing; (62-701.330(3)(c),FAC)
_____	_____	_____	<u>X</u>	a. Dimensions;
_____	_____	_____	<u>X</u>	b. Locations of proposed and existing water quality monitoring wells;
_____	_____	_____	<u>X</u>	c. Locations of soil borings;
_____	_____	_____	<u>X</u>	d. Proposed plan of trenching or disposal areas;
_____	_____	_____	<u>X</u>	e. Cross sections showing original elevations and proposed final contours which shall be included either on the plot plan or on separate sheets;
_____	_____	_____	<u>X</u>	f. Any previously filled waste disposal areas;
_____	_____	_____	<u>X</u>	g. Fencing or other measures to restrict access.
_____	_____	_____		4. Topographic maps with a scale not greater than 200 feet to the inch with 5-foot contour intervals showing; (62-701.330(3)(d),FAC):
_____	_____	_____	<u>X</u>	a. Proposed fill areas;
_____	_____	_____	<u>X</u>	b. Borrow areas;
_____	_____	_____	<u>X</u>	c. Access roads;
_____	_____	_____	<u>X</u>	d. Grades required for proper drainage;
_____	_____	_____	<u>X</u>	e. Cross sections of lifts;

S LOCATION N/A N/C

PART F CONTINUED

X

f. Special drainage devices if necessary;

X

g. Fencing;

X

h. Equipment facilities.

5. A report on the landfill describing the following;
(62-701.330(3)(e),FAC)

X

a. The current and projected population and area to be served by the proposed site;

X

b. The anticipated type, annual quantity, and source of solid waste, expressed in tons;

X

c. The anticipated facility life;

X

d. The source and type of cover material used for the landfill.

X

6. Provide evidence that an approved laboratory shall conduct water quality monitoring for the facility in accordance with Chapter 62-160,FAC;
(62-701.330(3)(h),FAC)

X

7. Provide a statement of how the applicant will demonstrate financial responsibility for the closing and long-term care of the landfill;
(62-701.330(3)(i),FAC)

G. GENERAL CRITERIA FOR LANDFILLS (62-701.340,FAC)

X

1. Describe (and show on a Federal Insurance Administration flood map, if available) how the landfill or solid waste disposal unit shall not be located in the 100-year floodplain where it will restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain unless compensating storage is provided, or result in a washout of solid waste; (62-701.340(4)(b),FAC)

X

2. Describe how the minimum horizontal separation between waste deposits in the landfill and the landfill property boundary shall be 100 feet, measured from the toe of the proposed final cover slope;
(62-701.340(4)(c),FAC)

X

3. Describe what methods shall be taken to screen the landfill from public view where such screening can practically be provided; (62-701.340(4)(d),FAC)

H. LANDFILL CONSTRUCTION REQUIREMENTS (62-701.400,FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
			<u>X</u>	1. Describe how the landfill shall be designed so that solid waste disposal units will be constructed and closed at planned intervals throughout the design period of the landfill; (62-701.400(2),FAC)
				2. Landfill liner requirements; (62-701.400(3),FAC)
				a. General construction requirements; (62-701.400(3)(a),FAC):
		<u>X</u>		(1) Provide test information and documentation to ensure the liner will be constructed of materials that have appropriate physical, chemical, and mechanical properties to prevent failure;
		<u>X</u>		(2) Document foundation is adequate to prevent liner failure;
		<u>X</u>		(3) Constructed so bottom liner will not be adversely impacted by fluctuations of the ground water;
		<u>X</u>		(4) Designed to resist hydrostatic uplift if bottom liner located below seasonal high ground water table;
		<u>X</u>		(5) Installed to cover all surrounding earth which could come into contact with the waste or leachate.
				b. Composite liners; (62-701.400(3)(b),FAC)
		<u>X</u>		(1) Upper geomembrane thickness and properties;
		<u>X</u>		(2) Design leachate head for primary LCRS including leachate recirculation if appropriate;
		<u>X</u>		(3) Design thickness in accordance with Table A and number of lifts planned for lower soil component.

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
----------	-----------------	------------	------------

PART H CONTINUED

c. Double liners; (62-701.400(3) (c), FAC)

- (1) Upper and lower geomembrane thicknesses and properties;
- (2) Design leachate head for primary LCRS to limit the head to one foot above the liner;
- (3) Lower geomembrane sub-base design;
- (4) Leak detection and secondary leachate collection system minimum design criteria ($k > 10$ cm/sec, head on lower liner ≤ 1 inch, head not to exceed thickness of drainage layer);

Not Applicable

d. Standards for geosynthetic components; (62-701.400(3) (d), FAC)

- (1) Field seam test methods to ensure all field seams are at least 90 percent of the yield strength for the lining material;
- (2) Geomembranes to be used shall pass a continuous spark test by the manufacturer;
- (3) Design of 24-inch-thick protective layer above upper geomembrane liner;
- (4) Describe operational plans to protect the liner and leachate collection system when placing the first layer of waste above 24-inch-thick protective layer.
- (5) HDPE geomembranes, if used, meet the specifications in GRI GM13;
- (6) PVC geomembranes, if used, meet the specifications in PGI 1197;
- (7) Interface shear strength testing results of the actual components which will be used in the liner system;
- (8) Transmissivity testing results of geonets if they are used in the liner system;
- (9) Hydraulic conductivity testing results of geosynthetic clay liners if they are used in the liner system;

S LOCATION N/A N/C

PART H CONTINUED

e. Geosynthetic specification requirements;
 (62-701.400(3)(e), FAC)

(1) Definition and qualifications of the
 designer, manufacturer, installer, QA
 consultant and laboratory, and QA program;

(2) Material specifications for geomembranes,
 geocomposites, geotextiles, geogrids, and
 geonets;

(3) Manufacturing and fabrication
 specifications including geomembrane raw
 material and roll QA, fabrication
 personnel qualifications, seaming
 equipment and procedures, overlaps, trial
 seams, destructive and nondestructive seam
 testing, seam testing location, frequency,
 procedure, sample size and geomembrane
 repairs;

(4) Geomembrane installation specifications
 including earthwork, conformance testing,
 geomembrane placement, installation
 personnel qualifications, field seaming
 and testing, overlapping and repairs,
 materials in contact with geomembrane and
 procedures for lining system acceptance;

(5) Geotextile and geogrid specifications
 including handling and placement,
 conformance testing, seams and overlaps,
 repair, and placement of soil materials
 and any overlying materials;

(6) Geonet and geocomposite specifications
 including handling and placement,
 conformance testing, stacking and joining,
 repair, and placement of soil materials
 and any overlying materials;

(7) Geosynthetic clay liner specifications
 including handling and placement,
 conformance testing, seams and overlaps,
 repair, and placement of soil material and
 any overlying materials;

f. Standards for soil components
 (62-710.400(3)(f), FAC):

(1) Description of construction procedures
 including overexcavation and backfilling
 to preclude structural inconsistencies and
 procedures for placing and compacting soil
 component in layers;

Not Applicable

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
----------	-----------------	------------	------------

PART H CONTINUED

- | | | | | |
|-------|-------|-------|-------|---|
| _____ | _____ | _____ | _____ | (2) Demonstration of compatibility of the soil component with actual or simulated leachate in accordance with EPA Test Method 9100 or an equivalent test method; |
| _____ | _____ | _____ | _____ | (3) Procedures for testing in-situ soils to demonstrate they meet the specifications for soil liners; |
| _____ | _____ | _____ | _____ | (4) Specifications for soil component of liner including at a minimum: |
| _____ | _____ | _____ | _____ | (a) Allowable particle size distribution, Atterberg limits, shrinkage limit; |
| _____ | _____ | _____ | _____ | (b) Placement moisture and dry density criteria; |
| _____ | _____ | _____ | _____ | (c) Maximum laboratory-determined saturated hydraulic conductivity using simulated leachate; |
| _____ | _____ | _____ | _____ | (d) Minimum thickness of soil liner; |
| _____ | _____ | _____ | _____ | (e) Lift thickness; |
| _____ | _____ | _____ | _____ | (f) Surface preparation (scarification); |
| _____ | _____ | _____ | _____ | (g) Type and percentage of clay mineral within the soil component; |
| _____ | _____ | _____ | _____ | (5) Procedures for constructing and using a field test section to document the desired saturated hydraulic conductivity and thickness can be achieved in the field. |

Not Applicable

3. Leachate collection and removal system (LCRS); (62-701.400(4), FAC)

a. The primary and secondary LCRS requirements; (62-701.400(4)(a), FAC)

- | | | | | |
|-------|-------|-------|-------|--|
| _____ | _____ | _____ | _____ | (1) Constructed of materials chemically resistant to the waste and leachate; |
| _____ | _____ | _____ | _____ | (2) Have sufficient mechanical properties to prevent collapse under pressure; |
| _____ | _____ | _____ | _____ | (3) Have granular material or synthetic geotextile to prevent clogging; |
| _____ | _____ | _____ | _____ | (4) Have method for testing and cleaning clogged pipes or contingent designs for rerouting leachate around failed areas; |

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
----------	-----------------	------------	------------

PART H CONTINUED

b. Primary LCRS requirements;
(62-701.400(4)(b), FAC)

(1) Bottom 12 inches having hydraulic conductivity $\geq 1 \times 10^{-3}$ cm/sec;

(2) Total thickness of 24 inches of material chemically resistant to the waste and leachate;

(3) Bottom slope design to accommodate for predicted settlement;

(4) Demonstration that synthetic drainage material, if used, is equivalent or better than granular material in chemical compatibility, flow under load and protection of geomembrane liner.

Not Applicable

4. Leachate recirculation; (62-701.400(5), FAC)

a. Describe general procedures for recirculating leachate;

b. Describe procedures for controlling leachate runoff and minimizing mixing of leachate runoff with storm water;

c. Describe procedures for preventing perched water conditions and gas buildup;

d. Describe alternate methods for leachate management when it cannot be recirculated due to weather or runoff conditions, surface seeps, wind-blown spray, or elevated levels of leachate head on the liner;

e. Describe methods of gas management in accordance with Rule 62-701.530, FAC;

f. If leachate irrigation is proposed, describe treatment methods and standards for leachate treatment prior to irrigation over final cover and provide documentation that irrigation does not contribute significantly to leachate generation.

S LOCATION N/A N/C

PART H CONTINUED

5. Leachate storage tanks and leachate surface impoundments; (62-701.400(6), FAC)

a. Surface impoundment requirements; (62-701.400(6)(b), FAC)

_____ _____ _____ X

(1) Documentation that the design of the bottom liner will not be adversely impacted by fluctuations of the ground water;

_____ _____ _____ X

(2) Designed in segments to allow for inspection and repair as needed without interruption of service;

(3) General design requirements;

_____ _____ _____ X

(a) Double liner system consisting of an upper and lower 60-mil minimum thickness geomembrane;

_____ _____ _____ X

(b) Leak detection and collection system with hydraulic conductivity ≥ 1 cm/sec;

_____ _____ _____ X

(c) Lower geomembrane placed on subbase ≥ 6 inches thick with $k \leq 1 \times 10^{-5}$ cm/sec or on an approved geosynthetic clay liner with $k \leq 1 \times 10^{-7}$ cm/sec;

_____ _____ _____ X

(d) Design calculation to predict potential leakage through the upper liner;

_____ _____ _____ X

(e) Daily inspection requirements and notification and corrective action requirements if leakage rates exceed that predicted by design calculations;

_____ _____ _____ X

(4) Description of procedures to prevent uplift, if applicable;

_____ _____ _____ X

(5) Design calculations to demonstrate minimum two feet of freeboard will be maintained;

_____ _____ _____ X

(6) Procedures for controlling disease vectors and off-site odors.

S LOCATION N/A N/C

PART H CONTINUED

b. Above-ground leachate storage tanks;
 (62-701.400 (6) (c), FAC)

- (1) Describe tank materials of construction and ensure foundation is sufficient to support tank;
- (2) Describe procedures for cathodic protection if needed for the tank;
- (3) Describe exterior painting and interior lining of the tank to protect it from the weather and the leachate stored;
- (4) Describe secondary containment design to ensure adequate capacity will be provided and compatibility of materials of construction;
- (5) Describe design to remove and dispose of stormwater from the secondary containment system;
- (6) Describe an overfill prevention system such as level sensors, gauges, alarms and shutoff controls to prevent overfilling;
- (7) Inspections, corrective action and reporting requirements;
 - (a) Overfill prevention system weekly;
 - (b) Exposed tank exteriors weekly;
 - (c) Tank interiors when tank is drained or at least every three years;
 - (d) Procedures for immediate corrective action if failures detected;
 - (e) Inspection reports available for department review.

c. Underground leachate storage tanks;
 (62-701.400 (6) (d), FAC)

- (1) Describe materials of construction;
- (2) A double-walled tank design system to be used with the following requirements;

Not Applicable

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
----------	-----------------	------------	------------

PART H CONTINUED

- | | | | | |
|-------|-------|-------|-------|--|
| _____ | _____ | _____ | _____ | (a) Interstitial space monitoring at least weekly; |
| _____ | _____ | _____ | _____ | (b) Corrosion protection provided for primary tank interior and external surface of outer shell; |
| _____ | _____ | _____ | _____ | (c) Interior tank coatings compatible with stored leachate; |
| _____ | _____ | _____ | _____ | (d) Cathodic protection inspected weekly and repaired as needed; |

Not Applicable

- | | | | | |
|-------|-------|-------|-------|--|
| _____ | _____ | _____ | _____ | (3) Describe an overfill prevention system such as level sensors, gauges, alarms and shutoff controls to prevent overfilling and provide for weekly inspections; |
| _____ | _____ | _____ | _____ | (4) Inspection reports available for department review. |

- | | | | | |
|-------|-------|-------|-------|---|
| _____ | _____ | _____ | _____ | d. Schedule provided for routine maintenance of LCRS; (62-701.400(6)(e), FAC) |
|-------|-------|-------|-------|---|

6. Liner systems construction quality assurance (CQA); (62-701.400(7), FAC)

- | | | | | |
|-------|-------|-------|-------|--------------------------------|
| _____ | _____ | _____ | _____ | a. Provide CQA Plan including: |
|-------|-------|-------|-------|--------------------------------|

- | | | | | |
|-------|-------|-------|-------|--|
| _____ | _____ | _____ | _____ | (1) Specifications and construction requirements for liner system; |
| _____ | _____ | _____ | _____ | (2) Detailed description of quality control testing procedures and frequencies; |
| _____ | _____ | _____ | _____ | (3) Identification of supervising professional engineer; |
| _____ | _____ | _____ | _____ | (4) Identify responsibility and authority of all appropriate organizations and key personnel involved in the construction project; |
| _____ | _____ | _____ | _____ | (5) State qualifications of CQA professional engineer and support personnel; |
| _____ | _____ | _____ | _____ | (6) Description of CQA reporting forms and documents; |

S LOCATION N/A N/C

PART H CONTINUED

- b. An independent laboratory experienced in the testing of geosynthetics to perform required testing;

7. Soil Liner CQA (62-701.400(8)FAC)

- a. Documentation that an adequate borrow source has been located with test results or description of the field exploration and laboratory testing program to define a suitable borrow source;
- b. Description of field test section construction and test methods to be implemented prior to liner installation;
- c. Description of field test methods including rejection criteria and corrective measures to insure proper liner installation.

Not Applicable

8. Surface water management systems; (62-701.400(9),FAC)

- a. Provide a copy of a Department permit for stormwater control or documentation that no such permit is required;
- b. Design of surface water management system to isolate surface water from waste filled areas and to control stormwater run-off;
- c. Details of stormwater control design including retention ponds, detention ponds, and drainage ways;

9. Gas control systems; (62-701.400(10),FAC)

- a. Provide documentation that if the landfill is receiving degradable wastes, it will have a gas control system complying with the requirements of Rule 62-701.530, FAC;

10. For landfills designed in ground water, provide documentation that the landfill will provide a degree of protection equivalent to landfills designed with bottom liners not in contact with ground water; (62-701.400(11),FAC)

I. HYDROGEOLOGICAL INVESTIGATION REQUIREMENTS (62-701.410(1), FAC)

S LOCATION N/A N/C

1. Submit a hydrogeological investigation and site report including at least the following information:

- a. Regional and site specific geology and hydrogeology;
- b. Direction and rate of ground water and surface water flow including seasonal variations;
- c. Background quality of ground water and surface water;
- d. Any on-site hydraulic connections between aquifers;
- e. Site stratigraphy and aquifer characteristics for confining layers, semi-confining layers, and all aquifers below the landfill site that may be affected by the landfill;
- f. Description of topography, soil types and surface water drainage systems;
- g. Inventory of all public and private water wells within a one-mile radius of the landfill including, where available, well top of casing and bottom elevations, name of owner, age and usage of each well, stratigraphic unit screened, well construction technique and static water level;
- h. Identify and locate any existing contaminated areas on the site;
- i. Include a map showing the locations of all potable wells within 500 feet, and all community water supply wells within 1000 feet, of the waste storage and disposal areas;

2. Report signed, sealed and dated by PE or PG.

Not Applicable

J. GEOTECHNICAL INVESTIGATION REQUIREMENTS (62-701.410(2), FAC)

S LOCATION N/A N/C

1. Submit a geotechnical site investigation report defining the engineering properties of the site including at least the following:

a. Description of subsurface conditions including soil stratigraphy and ground water table conditions;

b. Investigate for the presence of muck, previously filled areas, soft ground, lineaments and sink holes;

c. Estimates of average and maximum high water table across the site;

d. Foundation analysis including:

Not Applicable

(1) Foundation bearing capacity analysis;

(2) Total and differential subgrade settlement analysis;

(3) Slope stability analysis;

e. Description of methods used in the investigation and includes soil boring logs, laboratory results, analytical calculations, cross sections, interpretations and conclusions;

f. An evaluation of fault areas, seismic impact zones, and unstable areas as described in 40 CFR 258.13, 40 CFR 258.14 and 40 CFR 258.15.

2. Report signed, sealed and dated by PE or PG.

K. VERTICAL EXPANSION OF LANDFILLS (62-701.430, FAC)

S LOCATION N/A N/C

- | | | | | |
|-------|-------|-------|-------|---|
| _____ | _____ | _____ | _____ | 1. Describe how the vertical expansion shall not cause or contribute to leachate leakage from the existing landfill or adversely affect the closure design of the existing landfill; |
| _____ | _____ | _____ | _____ | 2. Describe how the vertical expansion over unlined landfills will meet the requirements of Rule 62-701.400, FAC with the exceptions of Rule 62-701.430(1)(c), FAC; |
| _____ | _____ | _____ | _____ | 3. Provide foundation and settlement analysis for the vertical expansion; |
| _____ | _____ | _____ | _____ | 4. Provide total settlement calculations demonstrating that the final elevations of the lining system, that gravity drainage, and that no other component of the design will be adversely affected; |
| _____ | _____ | _____ | _____ | 5. Minimum stability safety factor of 1.5 for the lining system component interface stability and deep stability; |
| _____ | _____ | _____ | _____ | 6. Provide documentation to show the surface water management system will not be adversely affected by the vertical expansion; |
| _____ | _____ | _____ | _____ | 7. Provide gas control designs to prevent accumulation of gas under the new liner for the vertical expansion. |

Not Applicable

L. LANDFILL OPERATION REQUIREMENTS (62-701.500, FAC)

- | | | | | |
|---|--|--|---|--|
| | | | X | 1. Provide documentation that landfill will have at least one trained operator during operation and at least one trained spotter at each working face; (62-701.500(1),FAC) |
| | | | | 2. Provide a landfill operation plan including procedures for: (62-701.500(2), FAC) |
| I | | | X | a. Designating responsible operating and maintenance personnel; |
| | | | X | b. Contingency operations for emergencies; |
| | | | X | c. Controlling types of waste received at the landfill; |
| | | | X | d. Weighing incoming waste; |
| | | | X | e. Vehicle traffic control and unloading; |
| | | | X | f. Method and sequence of filling waste; |
| | | | X | g. Waste compaction and application of cover; |
| | | | X | h. Operations of gas, leachate, and stormwater controls; |
| | | | X | i. Water quality monitoring. |
| | | | X | j. Maintaining and cleaning the leachate collection system; |
| | | | X | 3. Provide a description of the landfill operation record to be used at the landfill; details as to location of where various operational records will be kept (i.e. FDEP permit, engineering drawings, water quality records, etc.) (62-701.500(3),FAC) |
| | | | X | 4. Describe the waste records that will be compiled monthly and provided to the Department quarterly; (62-701.500(4),FAC) |
| | | | X | 5. Describe methods of access control; (62-701.500(5),FAC) |
| | | | X | 6. Describe load checking program to be implemented at the landfill to discourage disposal of unauthorized wastes at the landfill; (62-701.500(6),FAC) |
| | | | | 7. Describe procedures for spreading and compacting waste at the landfill that include: (62-701.500(7),FAC) |
| | | | X | a. Waste layer thickness and compaction frequencies; |

S LOCATION N/A N/C

PART L CONTINUED

_____ _____ _____ X

b. Special considerations for first layer of waste placed above liner and leachate collection system;

_____ _____ _____ X

c. Slopes of cell working face and side grades above land surface, planned lift depths during operation;

_____ _____ _____ X

d. Maximum width of working face;

e. Description of type of initial cover to be used at the facility that controls:

_____ _____ _____ X

(1) Disease vector breeding/animal attraction

_____ _____ _____ X

(2) Fires

_____ _____ _____ X

(3) Odors

_____ _____ _____ X

(4) Blowing litter

_____ _____ _____ X

(5) Moisture infiltration

_____ _____ _____ X

f. Procedures for applying initial cover including minimum cover frequencies;

_____ _____ _____ X

g. Procedures for applying intermediate cover;

_____ _____ _____ X

h. Time frames for applying final cover;

_____ _____ _____ X

i. Procedures for controlling scavenging and salvaging.

_____ _____ _____ X

j. Description of litter policing methods;

_____ _____ _____ X

k. Erosion control procedures.

8. Describe operational procedures for leachate management including; (62-701.500(8), FAC)

_____ _____ _____ X

a. Leachate level monitoring, sampling, analysis and data results submitted to the Department;

_____ _____ _____ X

b. Operation and maintenance of leachate collection and removal system, and treatment as required;

_____ _____ _____ X

c. Procedures for managing leachate if it becomes regulated as a hazardous waste;

_____ _____ _____ X

d. Agreements for off-site discharge and treatment of leachate;

_____ _____ _____ X

e. Contingency plan for managing leachate during emergencies or equipment problems;

S LOCATION N/A N/C

PART L CONTINUED

- | | | | | |
|-------|-------|-------|----------|---|
| _____ | _____ | _____ | <u>X</u> | f. Procedures for recording quantities of leachate generated in gal/day and including this in the operating record; |
| _____ | _____ | _____ | <u>X</u> | g. Procedures for comparing precipitation experienced at the landfill with leachate generation rates and including this information in the operating record; |
| _____ | _____ | _____ | <u>X</u> | h. Procedures for water pressure cleaning or video inspecting leachate collection systems. |
| _____ | _____ | _____ | <u>X</u> | 9. Describe how the landfill receiving degradable wastes shall implement a gas management system meeting the requirements of Rule 62-701.530, FAC; (62-701.500(9), FAC) |
| _____ | _____ | _____ | <u>X</u> | 10. Describe procedures for operating and maintaining the landfill stormwater management system to comply with the requirements of Rule 62-701.400(9); (62-701.500(10), FAC) |
| | | | | 11. Equipment and operation feature requirements; (62-701.500(11), FAC) |
| _____ | _____ | _____ | <u>X</u> | a. Sufficient equipment for excavating, spreading, compacting and covering waste; |
| _____ | _____ | _____ | <u>X</u> | b. Reserve equipment or arrangements to obtain additional equipment within 24 hours of breakdown; |
| _____ | _____ | _____ | <u>X</u> | c. Communications equipment; |
| _____ | _____ | _____ | <u>X</u> | d. Dust control methods; |
| _____ | _____ | _____ | <u>X</u> | e. Fire protection capabilities and procedures for notifying local fire department authorities in emergencies; |
| _____ | _____ | _____ | <u>X</u> | f. Litter control devices; |
| _____ | _____ | _____ | <u>X</u> | g. Signs indicating operating authority, traffic flow, hours of operation, disposal restrictions. |
| _____ | _____ | _____ | <u>X</u> | 12. Provide a description of all-weather access road, inside perimeter road and other roads necessary for access which shall be provided at the landfill; (62-701.500(12), FAC) |
| | | | | 13. Additional record keeping and reporting requirements; (62-701.500(13), FAC) |

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>

PART L CONTINUED

- a. Records used for developing permit applications and supplemental information maintained for the design period of the landfill;
- b. Monitoring information, calibration and maintenance records, copies of reports required by permit maintained for at least 10 years;
- c. Maintain annual estimates of the remaining life of constructed landfills and of other permitted areas not yet constructed and submit this estimate annually to the Department;
- d. Procedures for archiving and retrieving records which are more than five year old.

M. WATER QUALITY AND LEACHATE MONITORING REQUIREMENTS (62-701.510, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
_____	_____	_____	<u>X</u>	1. Water quality and leachate monitoring plan shall be submitted describing the proposed ground water, surface water and leachate monitoring systems and shall meet at least the following requirements;
_____	_____	_____	<u>X</u>	a. Based on the information obtained in the hydrogeological investigation and signed, dated and sealed by the PG or PE who prepared it; (62-701.510(2)(a), FAC)
_____	_____	_____	<u>X</u>	b. All sampling and analysis performed in accordance with Chapter 62-160, FAC; (62-701.510(2)(b), FAC)
_____	_____	_____		c. Ground water monitoring requirements; (62-701.510(3), FAC)
_____	_____	_____	<u>X</u>	(1) Detection wells located downgradient from and within 50 feet of disposal units;
_____	_____	_____	<u>X</u>	(2) Downgradient compliance wells as required;
_____	_____	_____	<u>X</u>	(3) Background wells screened in all aquifers below the landfill that may be affected by the landfill;
_____	_____	_____	<u>X</u>	(4) Location information for each monitoring well;
_____	_____	_____	<u>X</u>	(5) Well spacing no greater than 500 feet apart for downgradient wells and no greater than 1500 feet apart for upgradient wells unless site specific conditions justify alternate well spacings;
_____	_____	_____	<u>X</u>	(6) Well screen locations properly selected;
_____	_____	_____	<u>X</u>	(7) Procedures for properly abandoning monitoring wells;
_____	_____	<u>X</u>	_____	(8) Detailed description of detection sensors if proposed.

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>
_____	_____	_____	<u>X</u>

PART M CONTINUED

- d. Surface water monitoring requirements;
(62-701.510(4), FAC)
- (1) Location of and justification for all proposed surface water monitoring points;
 - (2) Each monitoring location to be marked and its position determined by a registered Florida land surveyor;
- e. Leachate sampling locations proposed;
(62-701.510(5), FAC)
- f. Initial and routine sampling frequency and requirements; (62-701.510(6), FAC)
- (1) Initial background ground water and surface water sampling and analysis requirements;
 - (2) Routine leachate sampling and analysis requirements;
 - (3) Routine monitoring well sampling and analysis requirements;
 - (4) Routine surface water sampling and analysis requirements.
- g. Describe procedures for implementing evaluation monitoring, prevention measures and corrective action as required; (62-701.510(7), FAC)
- h. Water quality monitoring report requirements;
(62-701.510(9), FAC)
- (1) Semi-annual report requirements;
 - (2) Bi-annual report requirements signed, dated and sealed by PG or PE.

N. SPECIAL WASTE HANDLING REQUIREMENTS (62-701.520, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	
—	—	—	—	1. Describe procedures for managing motor vehicles; (62-701.520(1), FAC)
—	—	—	X	2. Describe procedures for landfilling shredded waste; (62-701.520(2), FAC)
—	—	—	X	3. Describe procedures for asbestos waste disposal; (62-701.520(3), FAC)
—	—	—	X	4. Describe procedures for disposal or management of contaminated soil; (62-701.520(4), FAC)
—	—	—	X	5. Describe procedures for disposal of biological wastes; (62-701.520(5), FAC)

O. GAS MANAGEMENT SYSTEM REQUIREMENTS (62-701.530, FAC)

				1. Provide the design for a gas management systems that will (62-701.530(1), FAC):
—	—	—	X	a. Be designed to prevent concentrations of combustible gases from exceeding 25% the LEL in structures and 100% the LEL at the property boundary;
—	—	—	X	b. Be designed for site-specific conditions;
—	—	—	X	c. Be designed to reduce gas pressure in the interior of the landfill;
—	—	—	X	d. Be designed to not interfere with the liner, leachate control system or final cover.
—	—	—	X	2. Provide documentation that will describe locations, construction details and procedures for monitoring gas at ambient monitoring points and with soil monitoring probes; (62-701.530(2), FAC):
—	—	—	X	3. Provide documentation describing how the gas remediation plan and odor remediation plan will be implemented; (62-701.530(3), FAC):
				4. Landfill gas recovery facilities; (62-701.530(5), FAC):
—	—	X	—	a. Information required in Rules 62-701.320(7) and 62-701.330(3), FAC supplied;
—	—	X	—	b. Information required in Rule 62-701.600(4), FAC supplied where relevant and practical;
—	—	X	—	c. Estimate of current and expected gas generation rates and description of condensate disposal methods provided;
<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>	PART O CONTINUED
—	—	X	—	d. Description of procedures for condensate sampling, analyzing and data reporting provided;

_____ X _____

e. Closure plan provided describing methods to control gas after recovery facility ceases operation and any other requirements contained in Rule 62-701.400(10), FAC;

_____ X _____

f. Performance bond provided to cover closure costs if not already included in other landfill closure costs.

P. LANDFILL FINAL CLOSURE REQUIREMENTS (62-701.600, FAC)

1. Closure schedule requirements; (62-701.600(2), FAC)

_____ X _____

a. Documentation that a written notice including a schedule for closure will be provided to the Department at least one year prior to final receipt of wastes;

_____ X _____

b. Notice to user requirements within 120 days of final receipt of wastes;

_____ X _____

c. Notice to public requirements within 10 days of final receipt of wastes.

2. Closure permit general requirements; (62-701.600(3), FAC)

_____ X _____

a. Application submitted to Department at least 90 days prior to final receipt of wastes;

b. Closure plan shall include the following:

_____ X _____

(1) Closure report;

_____ X _____

(2) Closure design plan;

_____ X _____

(3) Closure operation plan;

_____ X _____

(4) Closure procedures;

_____ X _____

(5) Plan for long term care;

_____ X _____

(6) A demonstration that proof of financial responsibility for long term care will be provided.

3. Closure report requirements; (62-701.600(4), FAC)

a. General information requirements;

_____ X _____

(1) Identification of landfill;

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
----------	-----------------	------------	------------

PART P CONTINUED

- (2) Location, description and vicinity map;
- (3) Total acres of disposal areas and landfill property;
- (4) Legal property description;
- (5) History of landfill;
- (6) Identification of types of waste disposed of at the landfill.

b. Geotechnical investigation report and water quality monitoring plan required by Rule 62-701.330(3),FAC;

c. Land use information report indicating: identification of adjacent landowners; zoning; present land uses, and roads, highways right-of-way, or easements.

Not Applicable

d. Report on actual or potential gas migration at landfills containing degradable wastes which would allow migration of gas off the landfill property;

e. Report assessing the effectiveness of the landfill design and operation including results of geotechnical investigations, surface water and storm water management, gas migration and concentrations, condition of existing cover, and nature of waste disposed of at the landfill;

4. Closure design requirements to be included in the closure design plan: (62-701.600(5),FAC)

a. Plan sheet showing phases of site closing;

b. Drawings showing existing topography and proposed final grades;

c. Provisions to close units when they reach approved design dimensions;

d. Final elevations before settlement;

e. Side slope design including benches, terraces, down slope drainage ways, energy dissipators and discussion of expected precipitation effects;

f. Final cover installation plans including:

(1) CQA plan for installing and testing final cover;

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
----------	-----------------	------------	------------

PART P CONTINUED

- | | | | | |
|-------|-------|-------|-------|--|
| _____ | _____ | _____ | _____ | (2) Schedule for installing final cover after final receipt of waste; |
| _____ | _____ | _____ | _____ | (3) Description of drought-resistant species to be used in the vegetative cover; |
| _____ | _____ | _____ | _____ | (4) Top gradient design to maximize runoff and minimize erosion; |
| _____ | _____ | _____ | _____ | (5) Provisions for cover material to be used for final cover maintenance. |

g. Final cover design requirements:

- | | | | | |
|-------|-------|-------|-------|--|
| _____ | _____ | _____ | _____ | (1) Protective soil layer design; |
| _____ | _____ | _____ | _____ | (2) Barrier soil layer design; |
| _____ | _____ | _____ | _____ | (3) Erosion control vegetation; |
| _____ | _____ | _____ | _____ | (4) Geomembrane barrier layer design; |
| _____ | _____ | _____ | _____ | (5) Geosynthetic clay liner design if used; |
| _____ | _____ | _____ | _____ | (6) Stability analysis of the cover system and the disposed waste. |

h. Proposed method of stormwater control;

i. Proposed method of access control;

j. Description of proposed final use of the closed landfill, if any;

k. Description of the proposed or existing gas management system which complies with Rule 62-701.530, FAC.

5. Closure operation plan shall include:
(62-701.600(6), FAC)

- | | | | | |
|-------|-------|-------|-------|--|
| _____ | _____ | _____ | _____ | a. Detailed description of actions which will be taken to close the landfill; |
| _____ | _____ | _____ | _____ | b. Time schedule for completion of closing and long term care; |
| _____ | _____ | _____ | _____ | c. Describe proposed method for demonstrating financial responsibility; |
| _____ | _____ | _____ | _____ | d. Indicate any additional equipment and personnel needed to complete closure. |

Not Applicable

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

PART P CONTINUED

Not Applicable

e. Development and implementation of the water quality monitoring plan required in Rule 62-701.510, FAC.

f. Development and implementation of gas management system required in Rule 62-701.530, FAC.

6. Justification for and detailed description of procedures to be followed for temporary closure of the landfill, if desired; (62-701.600(7), FAC)

Q. CLOSURE PROCEDURES (62-701.610, FAC)

<u>S</u>	<u>LOCATION</u>	<u>N/A</u>	<u>N/C</u>
----------	-----------------	------------	------------

- | | | | | |
|-------|-------|-------|-------|---|
| _____ | _____ | _____ | _____ | 1. Survey monuments; (62-701.610(2), FAC) |
| _____ | _____ | _____ | _____ | 2. Final survey report; (62-701.610(3), FAC) |
| _____ | _____ | _____ | _____ | 3. Certification of closure construction completion; (62-701.610(4), FAC) |
| _____ | _____ | _____ | _____ | 4. Declaration to the public; (62-701.610(5), FAC) |
| _____ | _____ | _____ | _____ | 5. Official date of closing; (62-701.610(6), FAC) |
| _____ | _____ | _____ | _____ | 6. Use of closed landfill areas; (62-701.610(7), FAC) |
| _____ | _____ | _____ | _____ | 7. Relocation of wastes; (62-701.610(8), FAC) |

R. LONG TERM CARE REQUIREMENTS (62-701.620, FAC)

- | | | | | |
|-------|-------|-------|-------|---|
| _____ | _____ | _____ | _____ | 1. Maintaining the gas collection and monitoring system; (62-701.620(5), FAC) |
| _____ | _____ | _____ | _____ | 2. Right of property access requirements; (62-701.620(6), FAC) |
| _____ | _____ | _____ | _____ | 3. Successors of interest requirements; (62-701.620(7), FAC) |
| _____ | _____ | _____ | _____ | 4. Requirements for replacement of monitoring devices; (62-701.620(9), FAC) |
| _____ | _____ | _____ | _____ | 5. Completion of long term care signed and sealed by professional engineer (62-701.620(10), FAC). |

Not Applicable

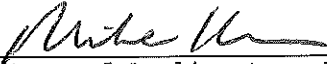
S. FINANCIAL RESPONSIBILITY REQUIREMENTS (62-701.630, FAC)

- | | | | | |
|-------|-------|-------|-------|--|
| _____ | _____ | _____ | _____ | 1. Provide cost estimates for closing, long term care, and corrective action costs estimated by a PE for a third party performing the work, on a per unit basis, with the source of estimates indicated; (62-701.630(3)&(7), FAC). |
| _____ | _____ | _____ | _____ | 2. Describe procedures for providing annual cost adjustments to the Department based on inflation and changes in the closing, long-term care, and corrective action plans; (62-701.630(4)&(8), FAC). |
| _____ | _____ | _____ | _____ | 3. Describe funding mechanisms for providing proof of financial assurance and include appropriate financial assurance forms; (62-701.630(5), (6), &(9), FAC). |

T. CERTIFICATION BY APPLICANT AND ENGINEER OR PUBLIC OFFICER

1. Applicant:

The undersigned applicant or authorized representative of Omni Waste of Osceola
County, LLC (Omni) is aware that statements made in this form and attached
information are an application for a Minor Modification Permit from the
Florida Department of Environmental Protection and certifies that the information in
this application is true, correct and complete to the best of his/her knowledge and
belief. Further, the undersigned agrees to comply with the provisions of Chapter
403, Florida Statutes, and all rules and regulations of the Department. It is
understood that the Permit is not transferable, and the Department will be notified
prior to the sale or legal transfer of the permitted facility.


Signature of Applicant or Agent
Mike Kaiser, Vice President
Name and Title (please type)
mkaiser@wasteservicesinc.com
E-Mail address (if available)


1501 Omni Way
Mailing Address
St. Cloud, Florida 34773
City, State, Zip Code
(904) 673-0446
Telephone Number

Date: 12/13/09

Attach letter of authorization if agent is not a governmental official, owner, or
corporate officer.

2. Professional Engineer registered in Florida (or Public Officer if authorized under
Sections 403.707 and 403.7075, Florida Statutes):

This is to certify that the engineering features of this solid waste management
facility have been designed/examined by me and found to conform to engineering
principles applicable to such facilities. In my professional judgment, this
facility, when properly maintained and operated, will comply with all applicable
statutes of the State of Florida and rules of the Department. It is agreed that the
undersigned will provide the applicant with a set of instructions of proper
maintenance and operation of the facility.


Signature
Brenda Ann Smith Clark, P.E.
Name and Title (please type)

42754
Florida Registration Number
(please affix seal)

15450 New Barn Road, Suite 304
Mailing Address
Miami Lakes, Florida 33014
City, State, Zip Code
brenda.clark@hdrinc.com
E-Mail address (if available)
(305) 728-7430
Telephone Number

Date: 16 December 2009

ENGINEERING DRAWINGS

PREPARED BY:

HDR

HDR Engineering, Inc.
5310 NW 33rd Avenue
Suite 212
Fort Lauderdale, FL 33309
Phone: (954) 535-1876

PREPARED FOR:



1501 OMNI WAY
ST. CLOUD, FLORIDA

Engineering Drawings For

OMNI WASTE OF OSCEOLA COUNTY, LLC. MINOR MODIFICATION APPLICATION J.E.D. SOLID WASTE MANAGEMENT FACILITY

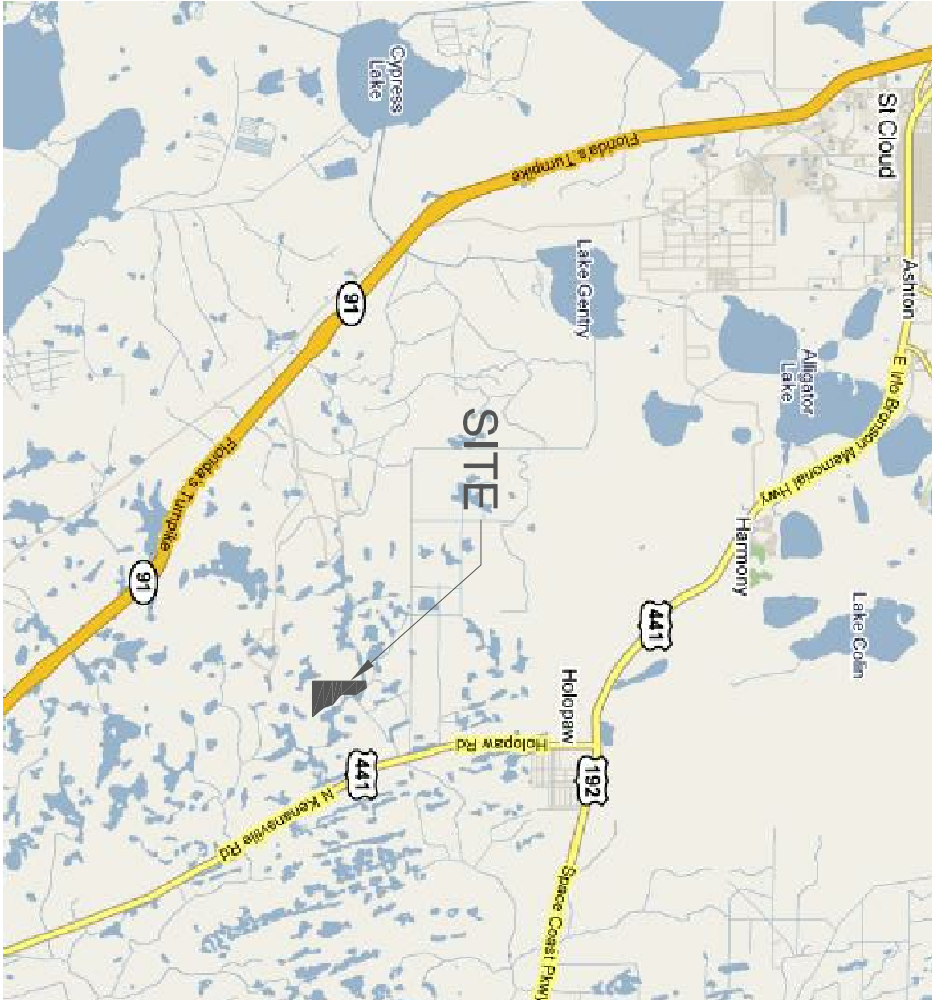
INDEX OF DRAWINGS

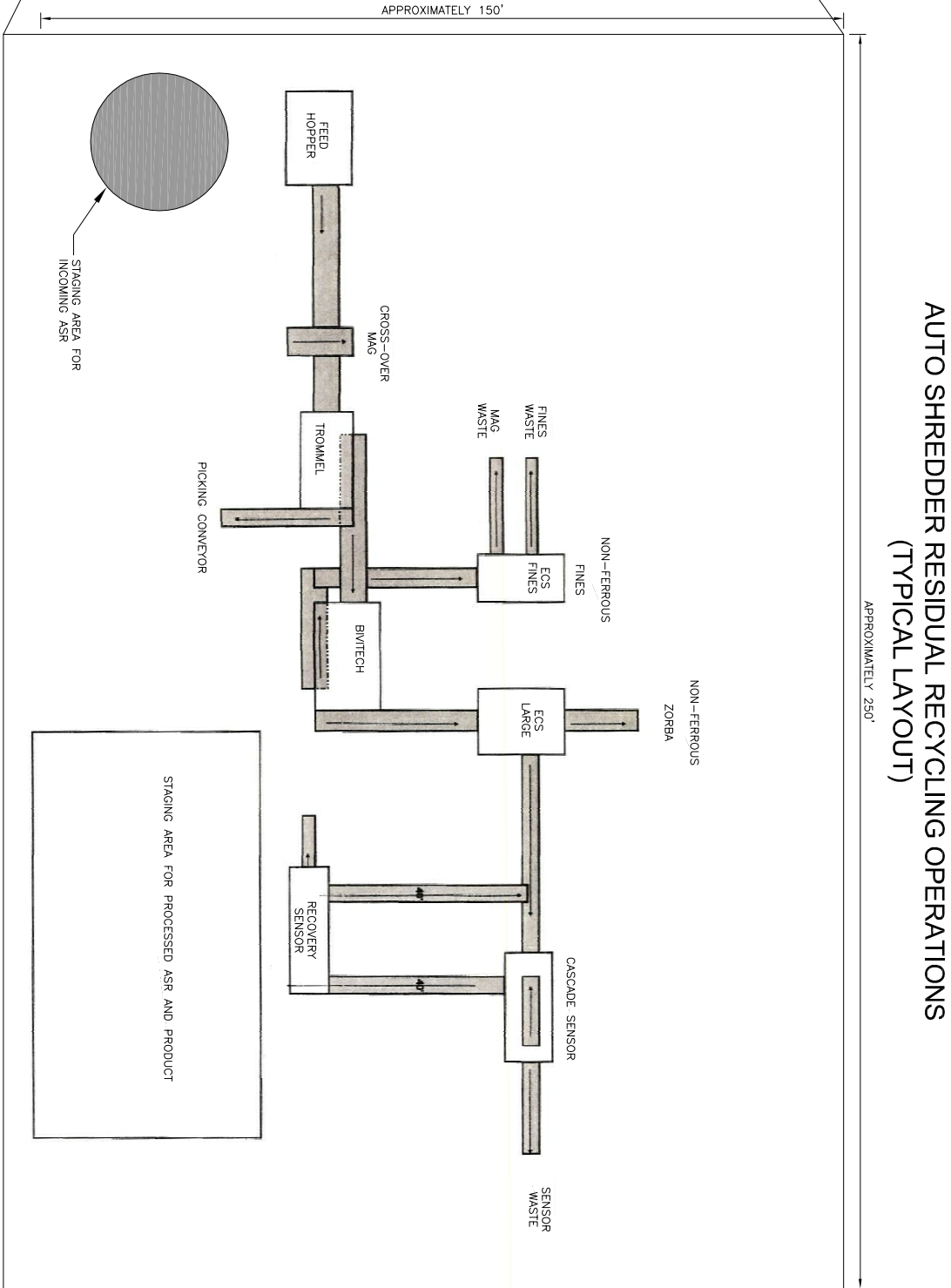
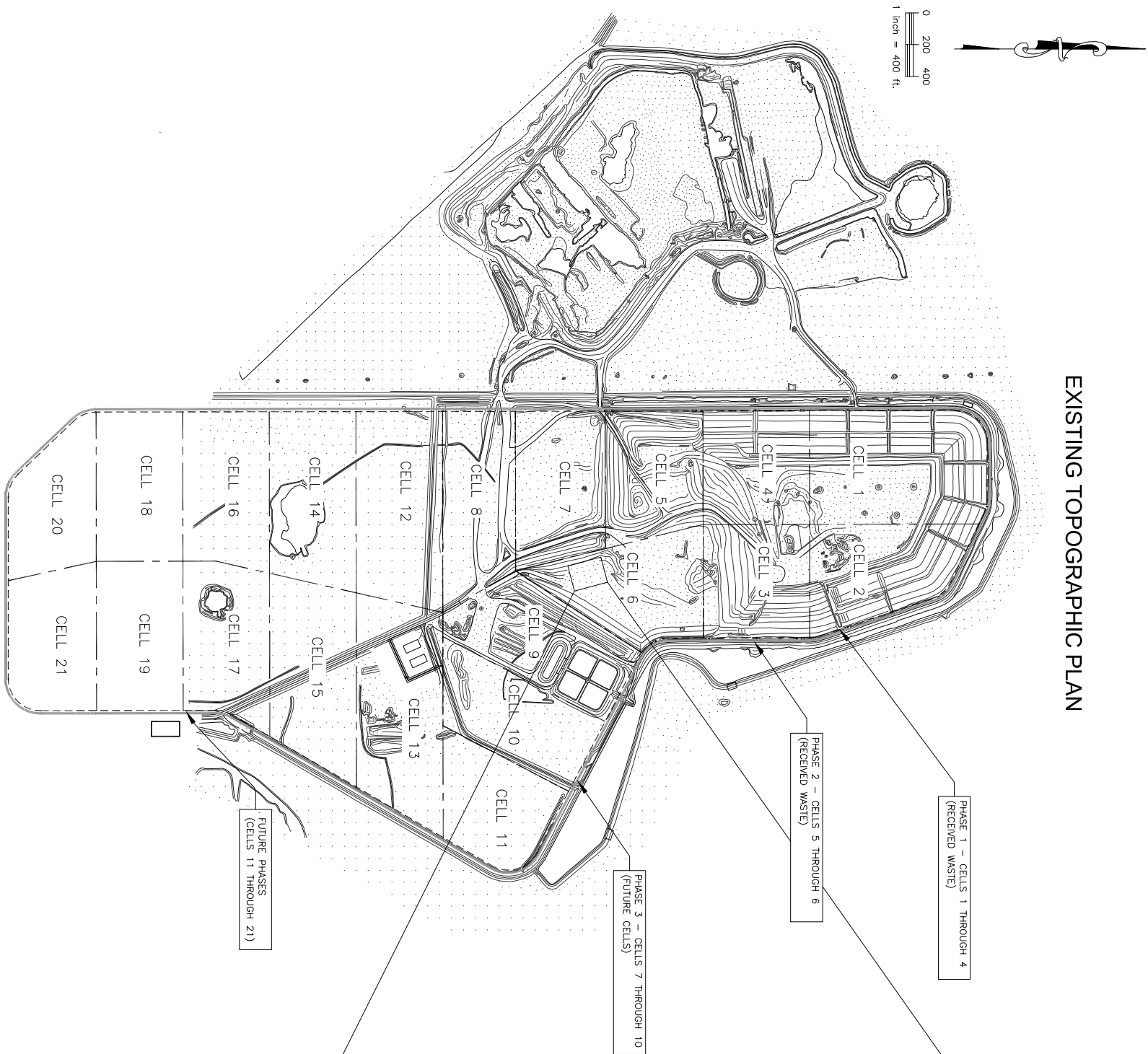
GENERAL

- 00C-01 COVER SHEET
- 00C-02 SITE PLAN FOR AUTO SHREDDER RESIDUAL RECYCLING OPERATIONS
- 00C-03 SITE PLAN FOR WASTE TIRE STORAGE AND PROCESSING OPERATIONS

Project No.
116377

ST. CLOUD, FLORIDA
DECEMBER 2009



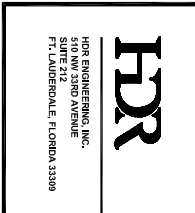


DESCRIPTION OF ABBREVIATIONS:

1. ASR - AUTO SHREDDER RESIDUAL
2. CROSS-OVER MAG - MAGNET POSITIONED OVER AND AT A 90 DEGREE ANGLE TO THE UNDERLYING CONVEYOR BELT AND USED TO PULL FERROUS STEEL FROM BELTS.
3. TROMMEL - LARGE SIZING TUMBLER WITH VARYING SIZED SCREENING HOLES.
4. BIVITECH - VIBRATING UNIT THAT MAY INCORPORATE DECKING ALONG WITH VARYING SIZED SCREENING.
5. ECS - EDDY CURRENT SEPARATOR. EQUIPMENT UTILIZING MAGNETIC POLARITY TO SEPARATE VARIOUS FERROUS/NON-FERROUS MATERIALS.
6. SENSOR UNIT - SEPARATION EQUIPMENT UTILIZING DENSITY/SPECIFIC GRAVITY TO SEPARATE VARIOUS CONSTITUENTS.
7. RECOVERY AND CASCADE SENSORS - SENSOR UNIT USED IN A SPECIFIC CONFIGURATION OR LOCATION TO ACHIEVE CERTAIN RESULTS (I.E. CASCADE SENSORS ARE A SERIES OF SENSORS, ONE CASCAING ONTO THE NEXT).
8. ZORBA - TERM USED IN THE SCRAP INDUSTRY TO REFER TO A BLEND OF METALS, PRIMARILY COMPOSED OF ALUMINUM (APPROXIMATELY 77%) AND THE REMAINING CONSISTING OF STAINLESS STEEL, ZINC, BRASS AND COPPER.

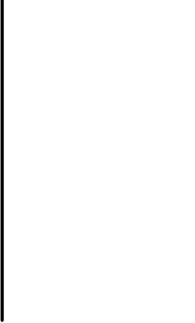
*NOTES:

1. AUTO SHREDDER RESIDUAL RECYCLING OPERATIONS WILL BE RELOCATED AS NECESSARY WITHIN PERMITTED AND LINED WASTE DISPOSAL AREA BASED ON WASTE DISPOSAL ACTIVITIES.
2. THE AREA WILL BE GRADED TO DIRECT STORMWATER AWAY FROM THE AUTO SHREDDER RESIDUAL AREA. LIQUID THAT INFILTRATES THROUGH THE WASTE WILL BE COLLECTED IN THE LEACHATE COLLECTION SYSTEM.
3. TOPOGRAPHIC INFORMATION OBTAINED FROM DRAWING PREPARED BY BASE MAPPING DATED JULY 25, 2009.



ISSUE	DATE	DESCRIPTION

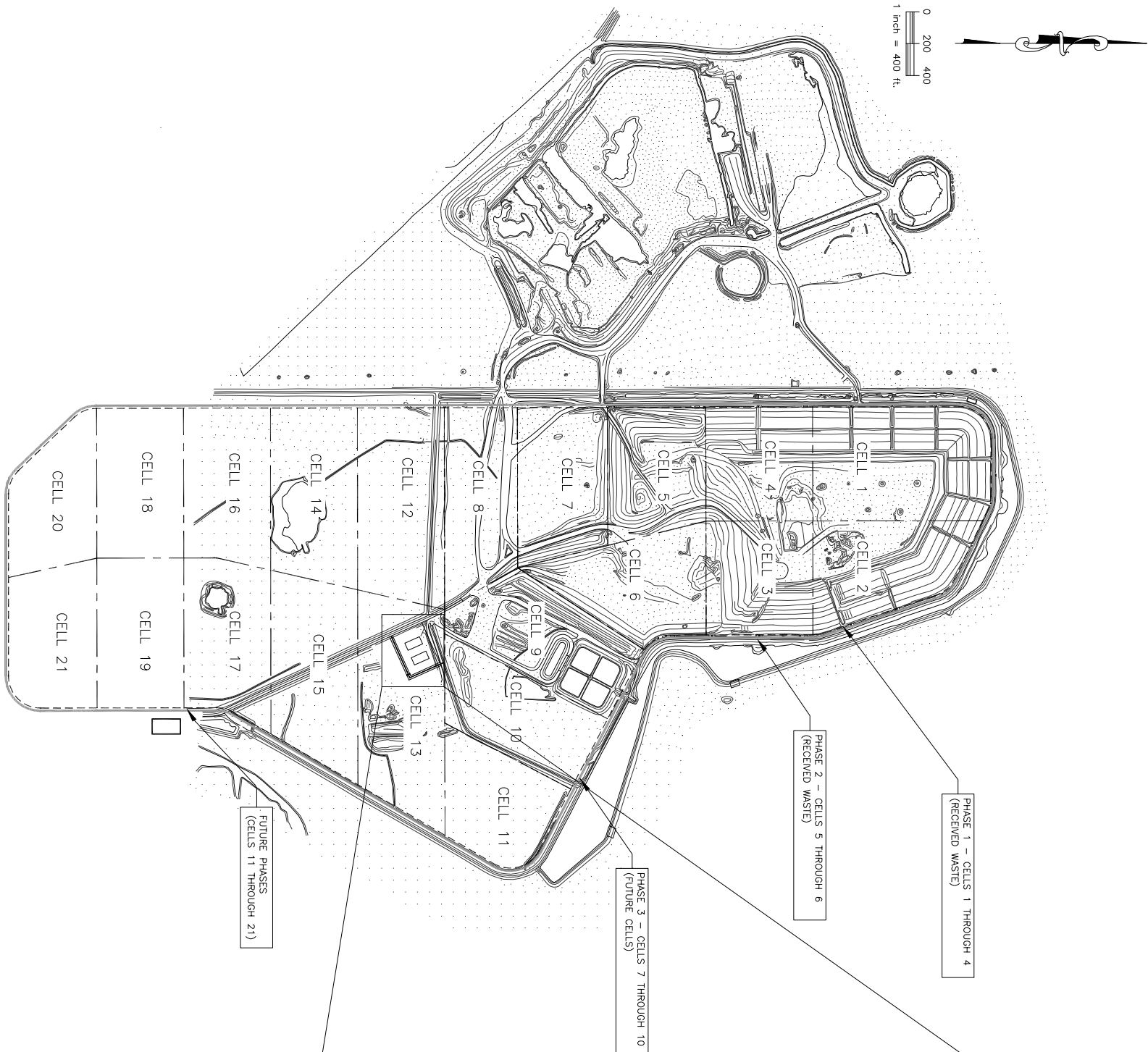
PROJECT MANAGER	BRENDA ANN SMITH CLARK, P.E.
PE. NO.	42754
PROJECT NUMBER	



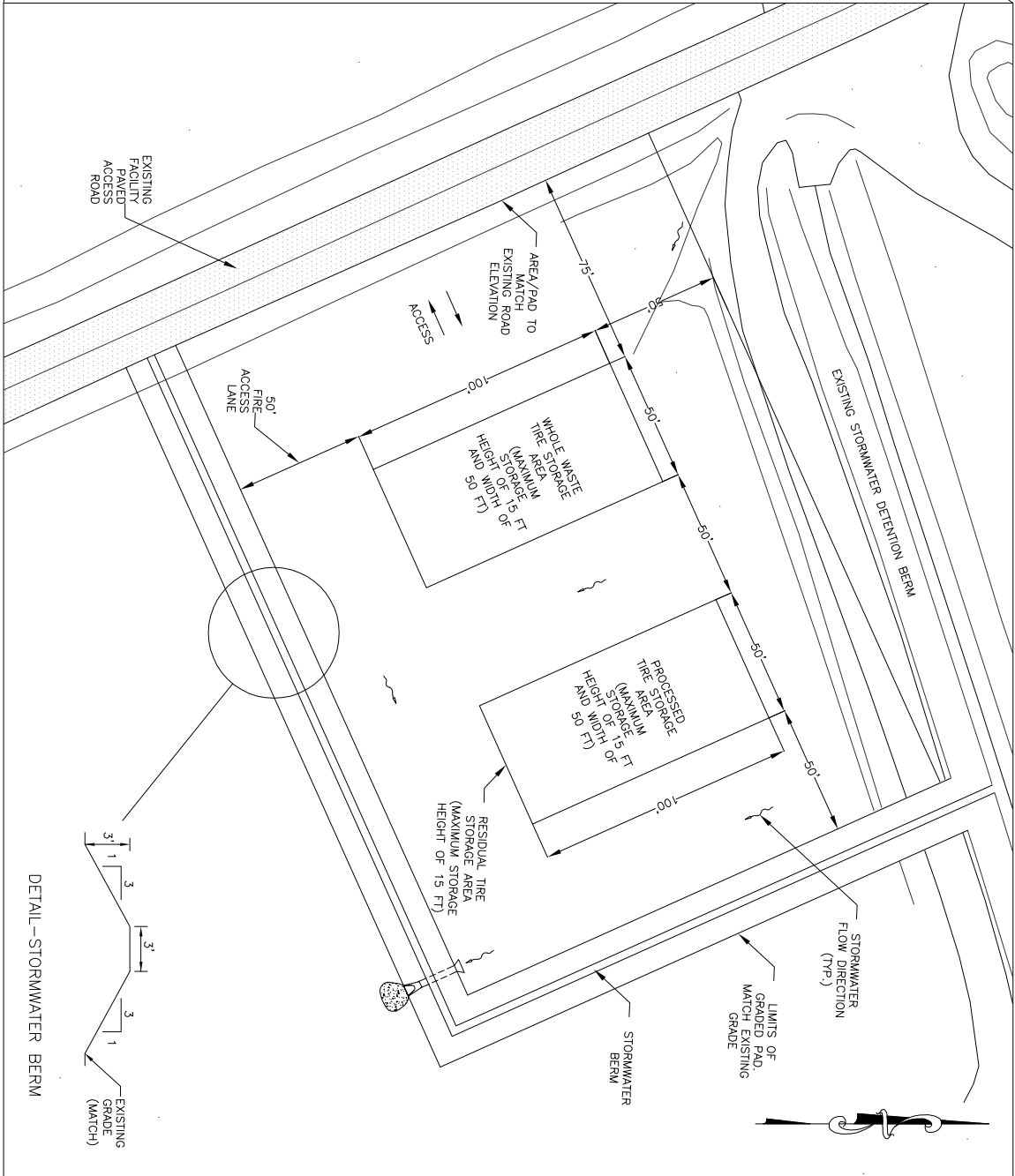
OMNI WASTE OF OSCEOLA COUNTY, LLC.
MINOR MODIFICATION APPLICATION
J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, FLORIDA

SITE PLAN FOR AUTO SHREDDER RESIDUAL RECYCLING OPERATIONS		
FILENAME	00C-02.DWG	SHEET
SCALE		2

EXISTING TOPOGRAPHIC PLAN



WASTE TIRE STORAGE AND PROCESSING AREA



SCALE: 1"=30'

- *NOTES:
1. THE WASTE TIRE STORAGE AND PROCESSING AREA WILL BE LOCATED IN THE AREA OF CELL 13 OF FUTURE PHASES, AS SHOWN.
 2. THE AREA WILL BE GRADED TO DIRECT STORM WATER AWAY FROM THE WASTE TIRE COLLECTION AND PROCESSING AREA TO THE SOUTHEAST CORNER.
 3. AREA WILL BE CONSTRUCTED WITH ROAD BASE MATERIAL AND MAINTAINED FOR VEHICLE ACCESS.
 4. 50 FT. MINIMUM SPACING WILL BE PROVIDED AROUND AND BETWEEN ALL STOCKPILES FOR EMERGENCY ACCESS.
 5. MOBILE TIRE PROCESSING (SHREDDING) EQUIPMENT WILL BE STATIONED NEAR THE SHOWN STOCKPILE LIMITS DURING PROCESSING.
 6. 40-CY ROLLOFF CONTAINER FOR RESIDUALS WILL BE STAGED NEAR THE SHOWN STOCK PILES DURING TIRE PROCESSING.
 7. CONTAINER WILL BE REMOVED WHEN PROCESSING IS COMPLETE.
 7. TOPOGRAPHIC INFORMATION OBTAINED FROM DRAWING PREPARED BY BASE MAPPING DATED JULY 25, 2009.



HDR

HDR ENGINEERING, INC.
500 NW 33RD AVENUE
SUITE 200
FT. LAUDERDALE, FLORIDA 33309

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	BRENDA ANN SMITH CLARK, P.E.
P.E. NO.	42754
PROJECT NUMBER	

OMNI WASTE OF OSCEOLA COUNTY, LLC.
MINOR MODIFICATION APPLICATION
J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, FLORIDA

SITE PLAN FOR
WASTE TIRE STORAGE
AND PROCESSING OPERATIONS

FILENAME	00C-02.DWG
SCALE	

SHEET
3

AUTO SHREDDER RESIDUAL RECYCLING PLAN



AUTO SHREDDER RESIDUAL RECYCLING PLAN

J.E.D. SOLID WASTE MANAGEMENT FACILITY

OMNI WASTE OF OSCEOLA COUNTY, LLC

1501 OMNI WAY

ST. CLOUD, FL

Prepared by:



15450 New Barn Road - Suite 304

Miami Lakes, FL 33014

Phone: (305) 728-7430

December 16, 2009

Brenda Ann Smith Clark
16 December 2009

TABLE OF CONTENTS

1. Introduction
2. Acceptance and Processing Operations
 - 2.1 Overview
 - 2.2 Waste Acceptance Procedures
 - 2.3 Waste Quantity
 - 2.4 Description of Technology/Processing Equipment
 - 2.5 Final Material Management
3. Environmental Controls
4. Nuisance Controls
5. Litter and Dust Control
6. Emergency Contingency Plan
7. Employee Training
8. Closure

Figure 1: Site Plan for Auto Shredder Residual Recycling Operations

1. INTRODUCTION

HDR Engineering, Inc. (HDR) has prepared this Auto Shredder Residual Recycling Plan (ASR Recycling Plan) to describe the processing operations of Auto Shredder Residual (ASR) recycling that will be performed at the J.E.D. Solid Waste Management Facility (Facility). Information included in this ASR Recycling Plan will be incorporated as Appendix F to the current approved Operation Plan prepared by Geosyntec Consultants dated September 14, 2007. The Facility is owned and operated by Omni Waste of Osceola County, LLC (Omni), a subsidiary company of Waste Services, Inc. (WSI). This Plan has been prepared in accordance with the requirements of Chapter 62-701, Solid Waste Management Facilities, of the Florida Administrative Code (FAC). The Facility is currently operating in accordance with Florida Department of Environmental Protection (FDEP) Permits Numbered SC49-0199726-004 and SO49-0199726-005, dated March 22, 2007, and subsequent permit modifications.

As authorized under the above Facility permits, Omni presently accepts ASR for direct disposal, use as daily cover, and use as a solidification material in the liquid waste solidification operations. Omni intends to further process a portion or all of the ASR material accepted at the Facility to recover remaining ferrous and non-ferrous metals, and wire components found within the waste material. The various metals will be recovered and segregated throughout the recycling process by size and chemistry/commodity type and then shipped to appropriate industrial customers as feed stock. A more detailed description of the ASR recycling operations is provided in the following sections.

2. ACCEPTANCE AND PROCESSING OPERATIONS

2.1 Overview

As noted in the previous section, ASR generated at off-site third party auto shredder facilities/operations is accepted at the Facility for direct disposal, use as daily cover, and use as a solidification material in the liquid waste solidification operations. Omni will subcontract operation of the ASR recycling operations to a 3rd party operator - Resource Reclamation, LLC (Resource Reclamation). Resource Reclamation operates several ASR and other material recovery operations throughout the northeast area.

The ASR recycling operations at the JED Facility will occur outdoors and will be performed within the lined limits of the Class I disposal area. Shown on attached Sheet 1 is a typical layout of the processing equipment required to perform the ASR recycling operations. Generally, the equipment consists of material transfer equipment, material sizing equipment, magnetic separation equipment, density separation equipment and mobile support equipment. An approximate 150 foot by 250 foot area will be established near the active disposal area and within the lined footprint. The initial location is planned in Cell 6 as shown on Sheet 1. Resource Reclamation will mobilize, assemble, and operate the necessary equipment to perform the ASR

recycling operations. The equipment will be relocated within the lined disposal area as necessary based on Facility disposal operations.

2.2 Waste Acceptance Procedures

ASR will continue to be accepted at the Facility as authorized under current permits and waste acceptance procedures described in the Facility's FDEP approved Operation Plan. Upon entering the Facility, ASR customers will be required to stop at the weigh scales and be weighed. The weigh scale attendant will record the weight, type of waste, and transporter/generator information. The weigh scale attendant will then contact appropriate site personnel to notify them that a load of ASR has been received and will direct the driver to the ASR processing area to be received by a spotter. The spotter will direct the customer to the specific offloading location and will monitor offloading activities.

2.3 Waste Quantity

Historically, the Facility has received an average of 165 tons/day of ASR beginning in 2004 and 655 tons/day in 2008 (based on 5 days/week). The quantity of ASR that will be processed at the Facility is based on the quality of ASR received, production capacity of the processing equipment, and commodity market conditions. It is anticipated a percentage of the ASR received at the Facility will be of lower quality (containing insufficient recyclables to warrant processing). ASR that meets the lower quality classification will not be processed and will continue to be disposed or used at the Facility as currently permitted. The production capacity of the processing equipment as shown on Sheet 1 is approximately 50 tons/hour (as reported by Resource Reclamation). Based on the current Facility operating hours (waste acceptance), 5:00 am to 4:00 pm, Monday through Friday, and 6:00 am to 2:00 pm on Saturday, approximately 550 tons of ASR could be processed on a daily basis. This daily processing capacity is expected to be sufficient to meet the daily intake of ASR that warrants processing. However, ASR recycling operations may be performed outside waste acceptance hours and on weekends if needed to meet future market demands.

2.4 Description of Technology/Processing Equipment

As previously noted and shown on Sheet 1, the ASR processing operation will be performed within the lined footprint of the landfill. The following is a description of the processing operations based on the equipment layout shown on Sheet 1.

ASR selected for processing will be offloaded and stockpiled near the in-feed hopper. A loader or crane type equipment will be used to load the ASR into the in-feed hopper. ASR material discharges from the hopper onto a conveyor that feeds a trommel screen. Cross over magnet equipment will be positioned over the conveyor to begin separation of ferrous metals from the ASR. The trommel screen will separate the ASR into two sized products. Larger sized material

will be discharged onto a picking conveyor where further manual separation of recyclables will occur. Material discharged at the end of the picking conveyor is considered non-recyclable and will be hauled to the active disposal area. Smaller sized material produced at the trommel screen will be discharged onto a conveyor that will feed a platform type vibrating equipment for further screening. Smaller sized material produced from the additional screening process will be discharged onto a conveyor that feeds an eddy current separator designed for smaller sized material. Larger sized material will be discharged onto a conveyor that feeds an eddy current separator designed for larger sized material. The eddy current separators use magnetic polarity to separate various ferrous and non-ferrous components. The eddy current separator used for the smaller sized material will be the final processing for that material. The eddy current separator used to process larger sized material will discharge non-ferrous metals to a conveyor that discharges to a process end location. Ferrous and other material from the eddy current separator will discharge onto a conveyor that feeds cascade and recovery type sensor equipment for final processing of the ASR. The cascade and recovery sensors utilize density/specific gravity sensors to separate various material types.

2.5 Final Material Management

ASR processing will result in the recovery of ferrous and non-ferrous metals, and other wire components. The manner in which recyclable and non-recyclable material (ASR waste) will be stockpiled at the end of each process conveyor will be dependent on the amount of material processed each day and quality. Typically, larger sized metal will be discharged/stockpiled on the ground surface at the process conveyor end locations. A loader will be used as needed to transfer the materials to roll-off type containers located in the processed material staging area. Smaller hoppers or front-end type loading bins may also be used at the end process locations for smaller material. ASR waste material will be stockpiled on the ground surface at the end locations and loaded onto heavy haul trucks for transport to the active disposal area as needed. Material management will be an important activity of the processing operation to maintain optimum operational efficiency. It is expected stockpiles of ASR waste will be removed from the processing area by the end of each day or prior to start-up of operations the following day.

The amount of recyclable material stored in the material staging area will also depend on the amount of material processed each day and quality. For each type of recyclable material, it is anticipated only a few 40 cubic yard roll-off or similar sized containers will be maintained in the staging area at any one time before being shipped off to the end user. All recyclable materials will be weighed and recorded for reporting purposes before being transported off-site.

3. Environmental Controls

ASR delivered to the Facility is characterized as non-hazardous, therefore recyclable materials produced during processing will also be classified as non-hazardous. ASR processing will occur within the lined landfill, over an area where waste disposal has occurred. Liquids that come in

contact with the ASR will be collected in the leachate collection system. Surface water runoff in the vicinity of the ASR recycling area will be managed in accordance with current permitted storm water management practices for active disposal areas, thereby preventing impacts to the surface water. Air quality permitting will be addressed with the Florida Department of Environmental, Air Resource Management Group.

4. Nuisance Controls

It is not anticipated the ASR recycling operations will produce additional vector, animal and insect nuisances beyond those existing for the current Class I disposal operations. The ASR is an inert material and is not expected to attract scavenging animals or pests. If needed, measures described in Section 4.6.4 of the Operation Plan will be implemented at the processing area.

5. Litter and Dust Control

If necessary, dust control will be provided at the processing equipment using water mist or spray systems installed in select locations on the equipment. Additionally, dust control practices described in Section 4.6.3 of the Operation Plan will be implemented at the processing areas. Litter control will be maintained in accordance Section 4.6.1 of the Operation Plan.

6. Emergency Contingency Plan

The ASR recycling operations are not expected to add any possible emergency situations above and beyond those described in Section 5 of the Operation Plan. Standard first aid and fire suppression equipment will be maintained at the area, including fire extinguishers within all heavy equipment. Employees of the subcontracted operator will be provided with proper communication equipment in order to respond to an emergency situation and will be trained in the response procedures outlined in the Operation Plan.

7. Employee Training

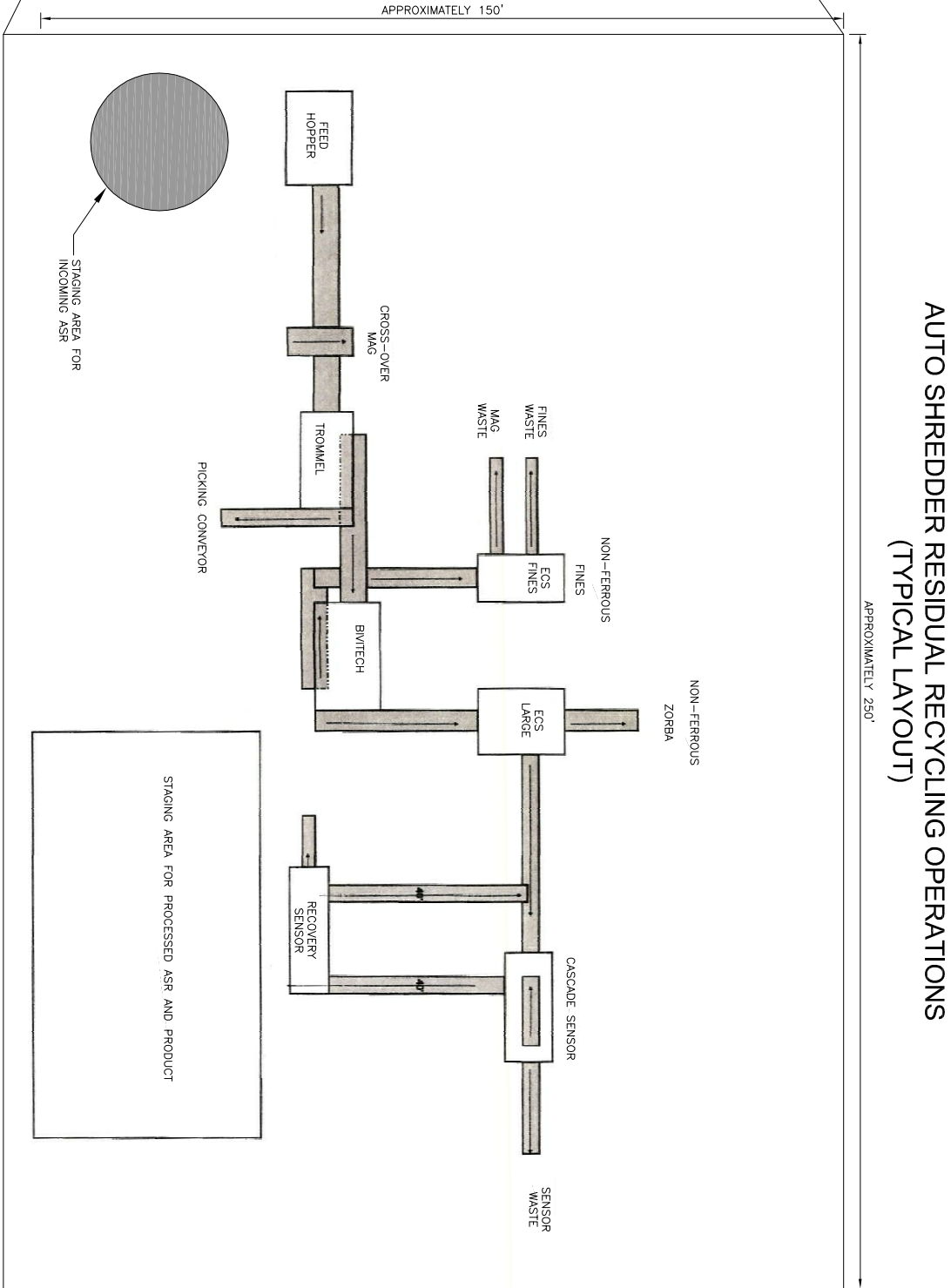
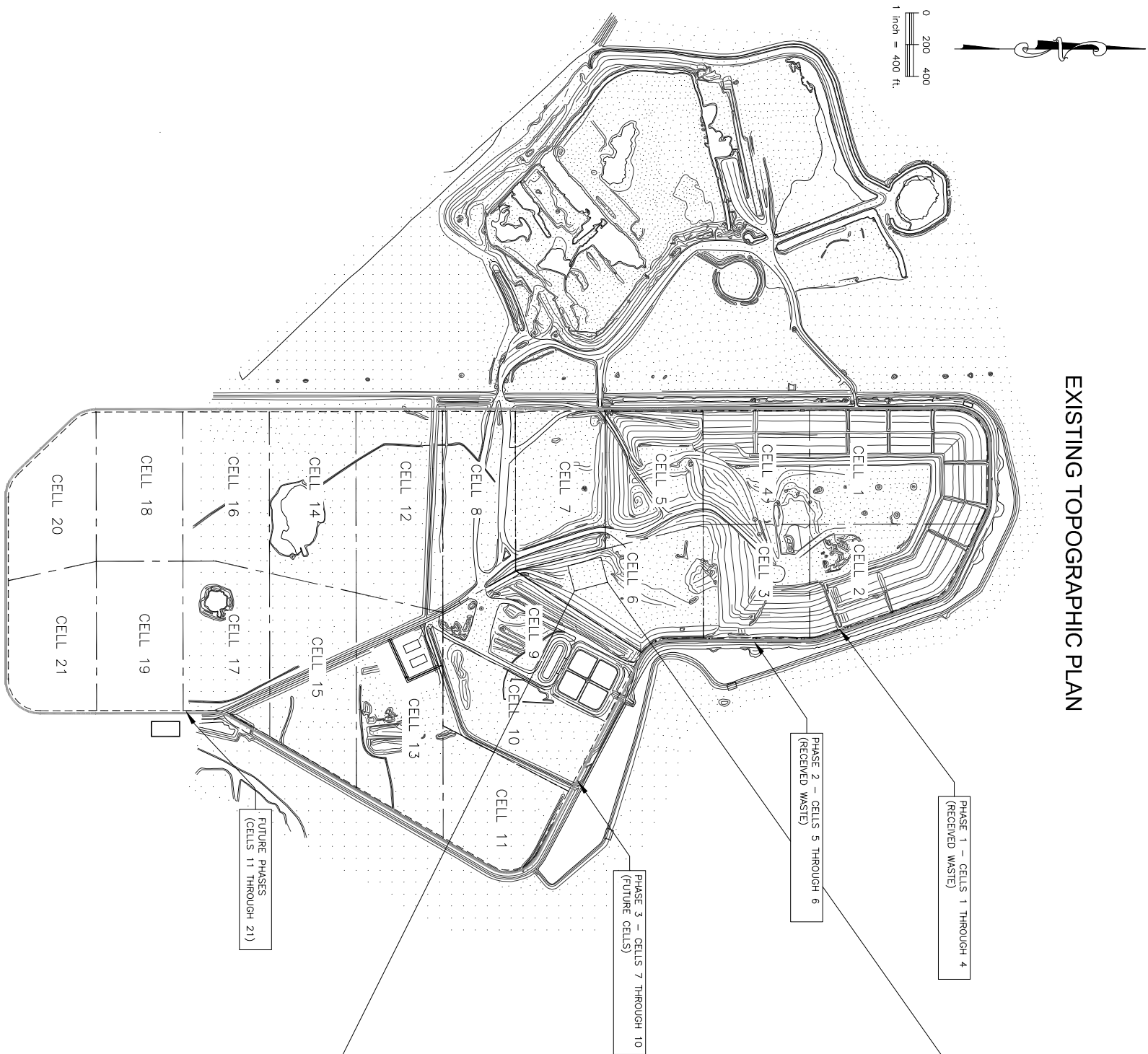
Employees of the subcontracted operator will be required to complete all necessary training required by the FDEP and WSI Policies, including the spotter and operator training described in section 2.1.2 of the Facility Operation Plan.

8. Closure

Closure of the ASR Recycling Area will be performed together with closure of the landfill or prior to that time if operations are no longer performed at the Facility. In closing the ASR Recycling Area, the following activities will be performed:

- Notice will be posted at the Facility weigh scales 30 days prior to closing indicating that the ASR Recycling Area will be closing and the date of closure. Notice of the closing will also be provided to the Florida Department of Environmental Protection (FDEP);
- Customers with ASR loads will be directed to the active disposal area or directed to another facility if the entire Facility is closed;
- Resource Reclamation will remove all processing equipment, support equipment, and marketable materials from the Facility; and
- Remaining ASR waste materials will be disposed in the active disposal area.

If the entire Facility is being closed, remaining closure procedures will be following as outlined in Section 7 of the Operation Plan.



DESCRIPTION OF ABBREVIATIONS:

1. ASR – AUTO SHREDDER RESIDUAL.
2. CROSS-OVER MAG – MAGNET POSITIONED OVER AND AT A 90 DEGREE ANGLE TO THE UNDERLYING CONVEYOR BELT AND USED TO PULL FERROUS STEEL FROM BELTS.
3. TROMMEL – LARGE SIZING TUMBLER WITH VARYING SIZED SCREENING HOLES.
4. BVTECH – VIBRATING UNIT THAT MAY INCORPORATE DECKING ALONG WITH VARYING SIZED SCREENING.
5. ECS – EDDY CURRENT SEPARATOR. EQUIPMENT UTILIZING MAGNETIC POLARITY TO SEPARATE VARIOUS FERROUS/NON-FERROUS MATERIALS.
6. SENSOR UNIT – SEPARATION EQUIPMENT UTILIZING DENSITY/SPECIFIC GRAVITY TO SEPARATE VARIOUS CONSTITUENTS.
7. RECOVERY AND CASCADE SENSORS – SENSOR UNIT USED IN A SPECIFIC CONFIGURATION OR LOCATION TO ACHIEVE CERTAIN RESULTS (I.E. CASCADE SENSORS ARE A SERIES OF SENSORS, ONE CASCADING ONTO THE NEXT).
8. ZORBA – TERM USED IN THE SCRAP INDUSTRY TO REFER TO A BLEND OF METALS, PRIMARILY COMPOSED OF ALUMINUM (APPROXIMATELY 77%) AND THE REMAINING CONSISTING OF STAINLESS STEEL, ZINC, BRASS AND COPPER.

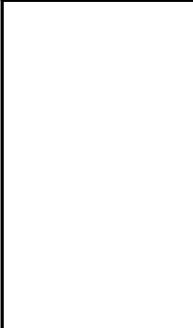
*NOTES:

1. AUTO SHREDDER RESIDUAL RECYCLING OPERATIONS WILL BE RELOCATED AS NECESSARY WITHIN PERMITTED AND LINED WASTE DISPOSAL AREA BASED ON WASTE DISPOSAL ACTIVITIES.
2. THE AREA WILL BE GRADED TO DIRECT STORMWATER AWAY FROM THE AUTO SHREDDER RESIDUAL AREA. LIQUID THAT INFILTRATES THROUGH THE WASTE WILL BE COLLECTED IN THE LEACHATE COLLECTION SYSTEM.
3. TOPOGRAPHIC INFORMATION OBTAINED FROM DRAWING PREPARED BY BASE MAPPING DATED JULY 25, 2009.



ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	BRENDA ANN SMITH CLARK, P.E.
P.E. NO.	42754
PROJECT NUMBER	

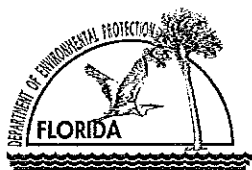


OMNI WASTE OF OSCEOLA COUNTY, LLC.
MINOR MODIFICATION APPLICATION
J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, FLORIDA

SITE PLAN FOR AUTO SHREDDER RESIDUAL RECYCLING OPERATIONS		
FILENAME	00C-02.DWG	SHEET
SCALE		1

ATTACHMENT B

**PERMIT APPLICATION FORM
DEP FORM #62-701.900(23)
WASTE TIRE PROCESSING FACILITY PERMIT
APPLICATION**



Department of Environmental Protection

DEP Form # 62-701.900(23)
Waste Tire Processing Facility
Form Title <u>Permit Application</u>
Effective Date <u>3/22/00</u>
DEP Application No. _____ (Filled in by DEP)

Waste Tire Processing Facility Permit Application

Permit No. _____

Renewal ☐ Modification ☐ Existing unpermitted facility ☐ Proposed new facility ☒

Part I-General Information:

A. Applicant Information:

1. Applicant Name: Omni Waste of Osceola County, LLC (Omni)
2. Applicant Street Address: 1501 Omni Way
3. City: St. Cloud County: Osceola Zip: 34773
4. Applicant Mailing Address: 1501 Omni Way
5. City: St. Cloud County: Osceola Zip: 34773
6. Contact person: Mike Kaiser Phone: (904) 673-0446 FEID No: _____
7. Have any enforcement actions been taken by the Department against the applicant relating to the operation of any solid waste management facility in this state? This includes any Complaint, Notice of Violation, or revocation of a permit or registration, as well as any Consent Order in which a violation of Department rules is admitted. It does not include a Warning Letter, Warning Notice, Notice of Noncompliance, or other similar document which does not constitute agency action.
Yes ☒ No ☐ If yes, attach a history and description of the enforcement actions.

B. Facility Information:

1. Facility Name: J.E.D. Solid Waste Management Facility
2. Facility Street Address (Main Entrance): 1501 Omni Way
3. City: St. Cloud County: Osceola Zip: 34773
4. Facility Mailing Address: 1501 Omni Way
5. City: St. Cloud State: Florida Zip: 34773
6. Contact Person: Mike Kaiser Phone: (904) 673-0446
7. Facility Location Coordinates:
Section: 11, 13, 14, 17, 18 Township: 28S Range: 32E, 33E
Latitude: 28 deg 03 min 32 sec Longitude: 81 deg 05 min 46 sec
8. Anticipated date for starting construction 3/1/2010 and for completion of construction 4/1/2010
9. Anticipated date for receipt of tires 4/1/2010 and for start of processing 4/15/2010

Mail completed form to
appropriate district office listed below

Northwest District
180 Governmental Center
Pensacola, FL 32501-5794
850-695-8360

Northeast District
7825 Baymeadows Way, Ste. 200 B
Jacksonville, FL 32256-7590
904-448-4300

Central District
3319 Maguire Blvd., Ste. 232
Orlando, FL 32803-3767
407-894-7555

Southwest District
3804 Coconut Palm Dr.
Tampa, FL 33619
813-744-6100

South District
2295 Victoria Ave., Ste. 364
Fort Myers, FL 33902-2549
941-332-6975

Southeast District
400 North Congress Ave.
West Palm Beach, FL 33401
561-681-6600

DEP Form # 62-701.900(23)
Waste Tire Processing Facility
Form Title <u>Permit Application</u>
Effective Date <u>3/22/00</u>
DEP Application No. _____ (Filled in by DEP)

C. Land Owner Information (if different from applicant):

- Owner's name: _____
- Land owner's mailing address: _____
- City: _____ State: _____ Zip: _____
- Authorized Agent: _____ Agent's phone () _____
- Current lease expires: _____

D. Facility Operator Information (if different from applicant):

- Operator's name: _____
- Operator's mailing address: _____
- City: _____ State: _____ Zip: _____
- Contact person: _____ Phone: () _____

E. Preparer of Application:

- Name of person preparing application: Brenda Ann Smith Clark, PE
- Mailing address: HDR Engineering, Inc., 15450 New Barn Road, Suite 304
- City: Miami Lakes State: Florida Zip: 33014
- Phone: (305) 728-7430
- Affiliation with facility: Consultant

Part II-Operations:

A. Facility type (check appropriate box):

- ☐ Waste tire processing facility.
- ☐ Waste tire processing facility with on-site disposal of processed tires or processing residuals.
See Attachment _____
- ☐ Waste tire processing facility with on-site consumption of waste tires or processing residuals.
See Attachment F
- ☒ Permitted solid waste management facility modification to allow waste tire site and processing.

B. Type of processing facility (check as many as apply):

- ☒ Shredder ☐ Cutter ☐ Chopper ☐ Incinerator only ☐ Incinerator with energy recovery
- ☐ Pyrolysis ☐ Supplemental fuel user ☐ Other, explain _____

C. Storage: Indicate the maximum quantities of whole waste tires, processed waste tires, and processing residuals, expressed in tons, to be stored at the facility, in accordance with Rule 62-711.530(2), F.A.C.

	Outdoor Storage(tons)	Outdoor Storage (sq.ft)	Indoor Storage (tons)	Indoor Storage (sq.ft)	Total Storage (tons)
Whole waste tires:	469	5,000			469
Processed tires:	469	5,000			469
Processing residuals:	10	160	40 cy roll off		10
TOTALS:	948	10,160			948

DEP Form # 62-701.900(23)
Waste Tire Processing Facility
Form Title <u>Permit Application</u>
Effective Date <u>3/22/00</u>
DEP Application No. _____ (Filled in by DEP)

D. For reporting quantity of tires in tons, tires will be: weighed on site ☐ weighed off site ☐ weights will be calculated ☐

E. Facilities that will not be disposing of processed tires or processing residual on the facility site must indicate the permitted solid waste management facility where processed tires or residuals will be disposed.

1. Name of facility J.E.D. Solid Waste Management Facility

2. Street address: 1501 Omni Way

3. City: St. Cloud County: Osceola Zip: 34773

F. Facilities that will be delivering processed tires to consuming facilities must describe the existing or proposed markets for those processed tires.

Existing market is use of processed tires for daily cover at the J.E.D. Solid Waste Management Facility.

Part III-Attachments:

A. Facility design See Attachment A, B, and C

NOTE: All maps, plan sheets, drawings, isometrics, cross sections, or aerial photographs shall be legible; be signed and sealed by a registered professional engineer responsible for their preparation; be of appropriate scale to show clearly all required details; be numbered, referenced to narrative, titled, have a legend of symbols used, contain horizontal and vertical scales (where applicable), and specify drafting or origination dates; and use uniform scales as much as possible, contain a north arrow and use NGVD for all elevations.

1. A topographic or section map of the facility, including the surrounding area for one mile, no more than one year old, showing land use and zoning within one mile of the facility
2. A plot plan of the facility on a scale of not less than one inch equals 200 feet. At a minimum, the plot plan shall include
 - a. The facility design, including the location and size of all storage and processing areas for used tires, unprocessed waste tires, processed waste tires, and waste tire processing residuals;
 - b. All wetlands and water bodies within the facility or within 200 feet of any storage area;
 - c. Stormwater control measures, including ditches, dikes, and other structures;
 - d. Boundaries of the facility, legal boundaries of the land containing the facility, and any easements or rights of way that are within the facility or within 200 feet of any storage area;
 - e. Location, size, and depth of all wells within the facility or within 200 feet of any storage area;
 - f. All structures and buildings that are, or will be, constructed at the facility; include those used in storage and processing operations;
 - g. All areas used for loading and unloading;
 - h. All access roads and internal roads, including fire lanes;
 - i. Location of all fences, gates, and other access control measures; and
 - j. Location of all disposal areas within the facility.

B. Facility operation. Attachment A, B, and C

1. A description of the facility's operation, process and products including how waste tires will be received and stored.
2. A description of the equipment used for processing tires. This description shall include the make, model, and hourly capacity of each piece of equipment.
3. Description of the waste from the process, the amount of waste expected and how and where this waste will be disposed of.
4. Statement of the maximum daily throughput and the planned daily and annual throughput. **See Section 3 WTSP Plan**
5. A description of how the operator will maintain compliance with each of the storage requirements of Rule 62-711.540, F.A.C.
6. A copy of the emergency preparedness manual for the facility with a statement of the on site and off site locations where that manual will be maintained.
7. A copy of the fire safety survey
8. A description of how 75% of the annual accumulation of waste tires will be removed for disposal or recycling.

C. Completed closing plan for the facility as required by Rule 62-711.700(2) and (3), F.A.C.

Attachment A, B, and C

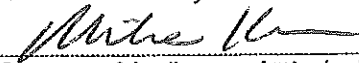
DEP Form # 62-701.900(23)
Waste Tire Processing Facility
Form Title Permit Application
Effective Date 3/22/00
DEP Application No. _____ (Filed in by DEP)

- D. Attach proof of financial responsibility as requirement by Rule 62-711.500(3) OR a calculation showing that financial assurance documents, currently on file with the Department, are sufficient to assure closing of the waste tire site as well as any other solid waste management facility at that location.
Provided under separate cover.
- E. A letter from the land owner (if different from applicant) authorizing use of the land as a waste tire processing facility.
Not applicable.
- F. If waste tires will be consumed at the facility, attach a description of the other environmental permits that the applicant has for this use, including, permit number, date of issue, and name of issuing agency
ERP49-0199752-001-EI (Phase 1 Individual), ERP49-0199752-002-EI (Conceptual), ERP 49-0199752-003 (Phase 2)
- G. The permit fee as required in Rule 62-4, F.A.C. Individual, and ERP49-0199752-004-EM (Phase 3 Individual).
Attached.

Part IV-Certification:

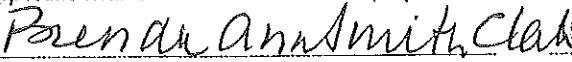
A. Applicant:

The undersigned applicant or authorized representative of Omni Waste of Osceola County, LLC (Omni)
is aware that statements made in this form and attached information are an application for a
New Permit from the Florida Department of Environmental Protection and certifies that
The information in this application is true, correct and complete to the best of his knowledge and belief.
Further, the undersigned agrees to comply with the provisions of Chapter 403, Florida Statutes, and all rules
and regulations of the Department. It is understood that the Department will be notified prior to the sale or
legal transfer of the facility.

	Mike Kaiser, Vice President	12/13/09
Signature of Applicant or Authorized Agent	Name and Title	Date

B. Professional Engineer registered in Florida.

This is to certify that the engineering features of this waste tire processing facility have been
Designed/examined by me and found to conform to engineering principals applicable to such facilities. In my
professional judgment, this facility, when properly maintained and operated will comply with all applicable
statutes of the State of Florida and rules of the Department. It is agreed that the undersigned will provide the
applicant with a set of instructions for proper maintenance and operation of the facility.

	5450 New Barn Road, Suite 304
Signature	Mailing Address
Brenda Ann Smith Clark, PE	Miami Lakes, Florida, 33014
Name and Title	City, State, Zip
42754	305-728-7400
Florida Registration Number	Telephone number

(please affix seal)

16 December 2009

Date



2893 Executive Park Drive, Suite 305, Weston, Florida 33331

February 6, 2009

RE: Omni Waste of Osceola County, LLC

To Whom It May Concern:

This is to confirm that Mike Kaiser is an authorized signatory of Omni Waste of Osceola County, LLC (the "Corporation"), with authority to execute and deliver all documents and instruments required in connection with environmental matters for the Corporation, including without limitation, permit applications, modifications and financial assurances for permits issued to the Corporation.

Waste Services, Inc.

A handwritten signature in black ink, appearing to read "Edwin D. Johnson", is written over a horizontal line.

Edwin D. Johnson
Executive Vice President & Chief Financial Officer

Omni Waste of Osceola County, LLC

A handwritten signature in black ink, appearing to read "Edwin D. Johnson", is written over a horizontal line.

Edwin D. Johnson
Manager

Waste Services Inc. - U.S. (Florida) Compliance History

Date	Facility	Location	Permit Number	Issuing Agency	Type of Action	Nature of Violation	Disposition	Fine or Penalty
11/29/05	Sarasota Transfer Station	Sarasota, FL	126776-003-SO	FDEP	NOV / Consent Order	Tipping floor not adequately draining and modified from permitted design.	Consent Order. Closed - Settlement fee was paid, permit modification submitted and constructed.	\$9,500
02/27/07	Pro Disposal - Alico (WSI - Alico)	Fort Myers, FL	0199986-001-SO	FDEP	NOV / Consent Order	Storage of materials, Records, Ventilation, Yard Trash Registration	Consent Order. Closed - Settlement fee was paid, permit modification submitted and approved. Note that the FDEP acknowledged in the closure letter that the violations causing the issuance occurred prior to WSI ownership.	\$2,250
06/29/07	Sarasota Transfer Station	Sarasota, FL	126776-002-SO	FDEP	NOV / Consent Order	Leachate Ponding on Floor, Ventilation, Tarping of Loads, Records	Consent Order. Closed - Settlement fee was paid.	\$12,000
10/31/07	Clearwater Material Transfer Station	Clearwater, FL	142414-004-SO	FDEP	NOV / Consent Order	Sediment in leachate drain, sweeping of floor, unacceptable waste in C&D waste, barrier wall missing	Consent Order. Closed - Settlement fee was paid.	\$8,500
10/31/07	Tampa Material Transfer Station	Tampa, FL	34481-004-SO	FDEP	NOV / Consent Order	Tipping floor in need of maintenance, unpermitted modification of leachate collection system, unacceptable waste in Class III waste, unlabelled oil containers	Consent Order. Closed - Repairs made to floor & leachate collection system. Settlement fee was paid.	\$10,000
07/30/08	SCMM Landfill	Balm, FL	35438-004-SO	FDEP	NOV / Consent Order	Unacceptable waste in C&D landfill, inadequate number of spotters, insufficient select waste layer, slopes steeper than 3 to 1, fill sequencing and phased closure of old fill.	Consent Order. Closed - Settlement fee was paid.	\$18,097
08/27/08	JED Landfill	St. Cloud, FL	SC49-0199726-004 & 005	FDEP	NOV / Consent Order	Installation of Gas Collection System and reporting.	Consent Order. Open - \$1,000 administrative fee paid, working with FDEP evaluating Pollution Prevention (P2) program in-lieu of \$60,200 fine.	\$1,000 + P2 Program
07/17/09	Sarasota Transfer Station	Sarasota, FL	126776-005-SO	FDEP	NOV / Consent Order	Leachate drain clogged, bulking paint, litter in tarping area.	Consent Order in progress. Proposed fine of \$5,000 was reduced to \$1,500.	\$1,500
07/23/09	SCMM Landfill	Balm, FL	35438-004-SO	FDEP	Warning Letter / NOV	Unacceptable items in the working face of the facility.	Consent Order. Closed - Settlement fee was paid.	\$5,000
07/23/09	Clearwater Material Transfer Station	Clearwater, FL	142414-004-SO	FDEP	Warning Letter / NOV	Unacceptable items in the accumulated waste in the C&D & Class III tipping areas.	Proposed fine of \$5,000 is likely to be reduced.	TBD

Note:

As of 12/01/2009 and subsequent to all facilities permit transfer to Waste Services.
List includes only those violations which have been issued fines or consent orders for facilities in Florida.

WASTE TIRE STORAGE AND PROCESSING PLAN



WASTE TIRE STORAGE AND PROCESSING PLAN

J.E.D. SOLID WASTE MANAGEMENT FACILITY

**OMNI WASTE OF OSCEOLA COUNTY, LLC
1501 OMNI WAY
ST. CLOUD, FL**

Prepared by:



15450 New Barn Road - Suite 304
Miami Lakes, FL 33014
Phone: (305) 728-7430

December 16, 2009

*Priscilla Smith Clark
16 December 2009*

TABLE OF CONTENTS

1. Overview
2. Waste Tire Receipt
3. Maximum Waste Tire Storage Volumes
4. Maximum Tire Processing Equipment
5. Tire Storage
 - 5.1 Whole Waste Tires
 - 5.2 Processed Waste Tires
 - 5.3 Waste Tire Storage Requirements and Prohibitions
6. Fire Prevention
7. Vector Control
8. Transportation of Waste and Processed Tire
9. Record Keeping and Reporting
10. Closure

Sheet 1. Waste Tire Storage and Processing Area

Exhibit A: Calculation of Maximum Whole and Processed Tire Storage Volumes

Exhibit B: Tire Processing Equipment Information

1. OVERVIEW

Waste tires will be accepted, stored and processed at the J.E.D. Solid Waste Management Facility (Facility) as authorized under Chapter 62-711, Waste Tire Rule, Florida Administrative Code (FAC). Processed tires will be disposed of or used as initial cover at the Facility as authorized under Rule 62-711.400(3), FAC. Rule 62-711.400(3) allows waste tires that have been cut into sufficiently small parts to be disposed of, or used as initial cover, at a permitted Class I landfill. For use as initial cover, a sufficiently small part means 70 percent of the waste tire material is cut into pieces of 4 square inches or less and 100 percent of the waste tire material is 32 square inches or less. For purposes of disposal, a sufficiently small part means that the tire has been cut into at least eight substantially equal pieces. Based on market conditions, the processed tires may also be transported to other authorized end users for other recycling uses or disposal at other permitted solid waste management facilities.

2. WASTE TIRE RECEIPT

Transporters of waste tires to the Facility will follow the typical site entrance procedures for processing of landfill customers. Upon completion of processing at the weigh scale, customers will be directed to the Waste Tire Storage and Processing (WTSP) Area and directed to offload at the designated storage location by a Facility spotter. Weigh scale attendants will notify Facility personnel that a waste tire customer is in route to the WTSP Area. The location of the WTSP Area is shown on the attached Sheet 1.

3. MAXIMUM WASTE TIRE STORAGE VOLUMES

In accordance with Rule 62-711.530(2), FAC, the maximum storage limits that will be set in a waste tire processing facility permit are:

- (a) For the aggregate of whole waste tires, processed waste tires, and residuals, 60 times the daily through-put of the processing equipment being used; however, whole waste tires shall not exceed 30 times the daily through-put of the processing equipment being used; and
- (b) For used tires, 10,000 used tires stored separately from other waste tires.

A summary of the maximum storage volumes and weights of whole waste tires, processed tires and residuals for the Facility is provided below. The maximum volumes and weights shown do not exceed the permitted volumes as allowed by the above Rule limits. Supporting calculations for the volumes shown are provided in Exhibit A.

Summary of Maximum Storage Volumes and Weights

One Storage Pile – Maximum Dimensions 50'W X 100'L X 15'H

Whole Waste Tires	41,670 tires	2,778 cy	469 tons
-------------------	--------------	----------	----------

One Storage Pile – Maximum Dimensions 50'W X 100'L X 15'H

Processed Tires	N/A	1,563 cy	469 tons
-----------------	-----	----------	----------

One 40-cy Roll-off Container

Residuals	N/A	40 cy	10 tons
-----------	-----	-------	---------

Note: The maximum daily throughput is limited to 469 tons based on the storage area limits. The planned daily throughput is approximately 30 tons and the annual 9,300 tons.

4. WASTE TIRE PROCESSING EQUIPMENT

The waste tire processing equipment used at the Facility will be a portable Saturn Model 72-44BGHT-300HP Shredder or similar equipment. The equipment will be stationed at the WTSP Area for use at the Facility or mobilized from other WSI owned facilities for use as needed. Information for the processing equipment is provided in Exhibit B.

5. TIRE STORAGE

5.1 Whole Waste Tires

Whole waste tires received at the Facility will be stored on the ground in a pile within the WTSP Area as shown on Sheet 1 (attached). Whole tires will be stacked/piled within an area 50 ft wide by 100 ft long and no higher than 15 ft. Tires will be processed when the pile reaches the maximum storage volume or sooner. Processed tires and any residuals will be stored as described in the following section.

5.2 Processed Waste Tires

Whole waste tires will be processed within the WTSP Area in the general location shown on Sheet 1. The processing equipment is equipped with conveyors that will allow the processed tires to be loaded directly into Facility haul trucks and transferred to the active disposal area for use as initial/daily cover or direct disposal. If desired, processed tires may also be temporarily stockpiled at the WTSP Area. If processed tires are stockpiled within the WTSP Area, they will be stockpiled in an area 50 ft wide by approximately 100 ft long, and no higher than 15 ft. Stockpiled processed tires will be removed from the area within 72 hours. Any residuals

produced during processing will be stored in one 40 cy roll-off box located at the WTSP Area. The residuals will be transferred to the disposal area when the roll-off container is filled. Based on the maximum storage volumes and shredder equipment process rates, it is estimated mobilization of the equipment, processing, cleanup and demobilization can be completed in approximately two days. Existing Facility heavy equipment will be used to handle whole tires, processed tires and residual materials.

5.3 Waste Tire Storage Requirements and Prohibitions

To satisfy the outdoor storage requirements of Rule 62-711.540, FAC, whole waste tires and processed tires stored in the WTSP Area will meet the following:

Rule 62-711.540(1)(a)

A sign will be maintained at the Facility entrance stating operating hours, cost of disposal and Facility rules.

Rule 62-711.540(1)(b)

No operations involving the use of open flames will be conducted within 25 feet of a waste tire pile.

Rule 62-711.540(1)(c)

An attendant will be present when the Facility is open for business.

Rule 62-711.540(1)(d)

Fire protection services for the Facility are assured through notification to the local fire protection authorities. A fire safety survey will be conducted at least annually and the survey report will be included with the next quarterly report submitted to the FDEP.

Rule 62-711.540(1)(e)

Emergency preparedness procedures are included in the Facility's Operation Plan kept on file at the Facility. An additional copy of the Operation Plan is kept at WSI's Orlando area hauling company located in Altamonte Springs, Florida. Additional fire prevention procedures are described in Section 6 of this Waste Tire Storage and Processing Plan. The emergency preparedness procedures will be reviewed at least annually and updated as necessary. The following information is included in Section 6 or the Operation Plan:

1. A list of names and numbers of persons to be contacted in the event of a fire, flood, or other emergency:

2. A list of emergency response equipment at the site, it's location, and how it should be used in the event of a fire or other emergency; and
3. A description of the procedures that will be followed in the event of a fire, including procedures to contain and dispose of the oily material generated by the combustion of large numbers of waste tires.

Rule 62-711.540(1)(f)

Facility personnel will immediately notify the FDEP in the event of a fire or other emergency which poses an unanticipated threat to the public health or the environment and will submit a written report of the emergency to the FDEP within two weeks of the emergency. The report will describe the origins of the emergency, the actions taken to deal with the emergency, results of the actions that were taken, and an analysis of the success or failure of the actions.

Rule 62-711.540(1)(g)

Records of the quantity of tires received, stored, processed and shipped will be maintained at the Facility as described in Section 9 of this Plan.

Rule 62-711.540(1)(h)

Omni Waste of Osceola County, LLC is the owner of the property.

Rule 62-711.540(1)(i)

Communication equipment is maintained at the Facility to assure the local fire protection authorities can be notified in case of a fire.

Rule 62-711.540(1)(j)

Mosquito and rodent control methods are described in Section 7 of this Plan.

Rule 62-711.540(1)(k)

The WTSP Area is located adjacent to the paved access road leading to the active disposal area. The road will be kept passable for any motor vehicle at all times.

Rule 62-711.540(3)(a)

The location of the WTSP Area is within the future disposal footprint boundary as shown on Sheet 1 (attached). This location is not within 200 feet of any natural or artificial body of water, including wetlands within the jurisdiction of the Department.

Rule 62-711.540(3)(b)

The outdoor waste tire, processed tire and residual storage will not exceed 50 ft in width, 10,000 sq ft in area, or 15 ft in height.

Rule 62-711.540(3)(c)

A minimum 50 ft wide fire lane will be maintained around each outdoor waste tire pile. Access to the fire lane for emergency vehicles will be maintained at all times.

Rule 62-711.540(3)(d)

Access to the Facility is controlled through use of fences, gates and natural barriers.

Rule 62-711.540(3)(e)

The WTSP Area is located within the future disposal area as shown on Sheet 1. A storm water detention berm has been constructed around the entire future disposal footprint as required of the Facility's Environmental Resource Permit issued by the FDEP. This berm is designed to contain all storm water discharged from the active disposal operations, including the WTSP Area. In addition to this berm, a smaller storm water berm will be constructed around the WTSP Area to assist in containment of liquid runoff from a potential waste tire fire from entering water bodies.

Rule 62-711.540(3)(f)

The WTSP Area will be kept free of grass, underbrush, and other potentially flammable vegetation at all times.

Rule 62-711.540(4)

Processed tires stockpiled at the WTSP Area will be removed within 72 hours after processing. This will greatly reduce or eliminate the possibility of processed tire piles from exceeding 300 degrees Fahrenheit.

Rule 62-711.540(5)

Any residuals produced during tire processing will be loaded in a roll-off container and disposed at the active disposal area as needed.

To satisfy the prohibitions contained in Rule 62-701.300, FAC, the WTSP Area will meet the following:

The construction/operation of the WTSP Area will not violate the following prohibitions of Rule 62-701.300 of the Florida Administrative Code (F.A.C):

- General Prohibition: No waste tires will be stored, processed or disposed of at the Facility:
 - except as authorized by a permit from FDEP [Rule 62-701.300(1)(a)], and
 - in a manner that would cause violation of air quality standards or water quality standards [Rule 62-701.300(1)(b)]; and
- Siting: As noted in the 5-Year Permit Renewal Application submitted in September 2006 and the Vertical Expansion Application submitted in September 2007, the below siting prohibitions were met with regards to the solid waste transfer and recycling activities performed at the Facility. Therefore, the siting prohibitions for storage and processing of waste tires is also met. Specifically, there are no potable water wells within 500 feet of the Facility and no natural or artificial body of water within 200 feet of the Facility. No waste tires will be stored or disposed of:
 - in an area where geological formations or other subsurface features will not provide adequate support [Rule 62-701.300(2)(a)],
 - within 500 feet of any existing or approved potable water well [Rule 62-701.300(2)(b)],
 - in a dewatered pit [Rule 62-701.300(2)(c)],
 - in an area subject to frequent and periodic flooding [Rule 62-701.300(2)(d)],
 - in a natural or artificial body of water [Rule 62-701.300(2)(e)],
 - within 200 feet of a any natural or artificial body of water [Rule 62-701.300(2)(f)],
 - on the right of way of any public highway, road, or alley [Rule 62-701.300(2)(g)], and
 - within 1000 feet of an existing or approved potable water well serving a community water supply as defined in subsection 62-550.200(12), FAC [Rule 62-701.300(2)(h)].

Other prohibitions, as stated in Rules 62-701.300(3) through (6) and (8) through (11), FAC are not applicable to waste tire processing facility.

6. FIRE PREVENTION

The following fire prevention measures will be implemented for the tire storage and processing operations:

- Whole and processed tires will be stored in separated stockpiles which will greatly improve the ability to fight fires and reduce fire propagation;
- Adequate communication equipment will be maintained at the Facility to assure the local fire protection authorities can be notified in case of a fire;
- A 50 foot fire access lane will be maintained around each whole tire and processed tire stockpile for emergency access;
- No operations involving the use of open flames will be conducted within 25 feet of a waste tire pile;
- The WTSP Area will be kept free of grass, underbrush, and other potentially flammable vegetation at all times;
- Facility heavy equipment, including dozers, loaders, excavators, backhoes and water wagons will be available to assist Facility and fire department personnel in fighting possible fires;
- The road to the WTSP Area will be kept passable for any motor vehicle at all times;
- Processed tires stockpiled at the WTSP Area will be removed within 72 hours after processing. This will greatly reduce or eliminate the possibility of processed tire piles from exceeding 300 degrees Fahrenheit;
- A fire safety survey will be conducted at least annually and the survey report will be included with the next quarterly report submitted to the FDEP; and
- All fire fighting equipment stored at the WTSP Area will be inspected weekly. Fire extinguishers will be serviced at least annually, or as needed.

7. VECTOR CONTROL

Facility personnel will monitor the WTSP Area on a daily basis for the presence of rodents and other vectors (including collected water for mosquito development). Traps and insecticide applications will be performed by a 3rd party pest control company if deemed necessary.

8. TRANSPORTATION OF WASTE AND PROCESSED TIRES

Rule 62-711.520, FAC requires any waste tire collector engaged in collecting or transporting waste tires for the purpose of storage, sale, recycling, reuse, disposal or processing to be properly registered with the Florida Department of Environmental Protection (FDEP). Additionally, Rule 62-711.400(5), FAC requires anyone that contracts the services of a waste tire collector for the transportation, disposal, or processing of waste tires to ensure the collector is registered with the FDEP or exempt from registration requirements. Omni will maintain records of waste tire collectors and volumes as described below.

9. RECORD KEEPING AND REPORTING

In accordance with Rule 62-711.530(4), FAC, information regarding waste tire acceptance, storage and processing will be recorded and maintained for three years. Records will be made

available at the site for inspection by the FDEP during normal business hours. The records will include the following:

- a). For all waste tires shipped from the WTSP Area, the name and waste tire collection registration number of the waste tire collector who accepted the waste tires for transport, and the quantity of waste tires shipped with that collector; and if the waste tires were shipped with a person who is not a waste tire collector, the number of tires shipped, the person's name, address and telephone number; and the place where the waste tires were deposited;
- b) For all waste tires received at the WTSP Area, the name and waste tire collector registration number of the collector who delivered the waste tires to the WTSP Area, and the quantity of waste tires received from that collector, and if more than five waste tires were delivered by a person who is not a waste tire collector, the number of tires delivered and the person's name, address and telephone number; and
- c) For all waste tires removed for recapping, the quantity and type removed, and the name and location of the recapping facility receiving the tires.

In accordance with Rule 62-711.530(5), FAC, quarterly reports shall be submitted to the FDEP that summarizes the information above. The reports will be submitted by the 20th of the month following the close of each calendar quarter. The reports will be submitted on DEP Form # 62-701.900(21) and will also include the information listed below:

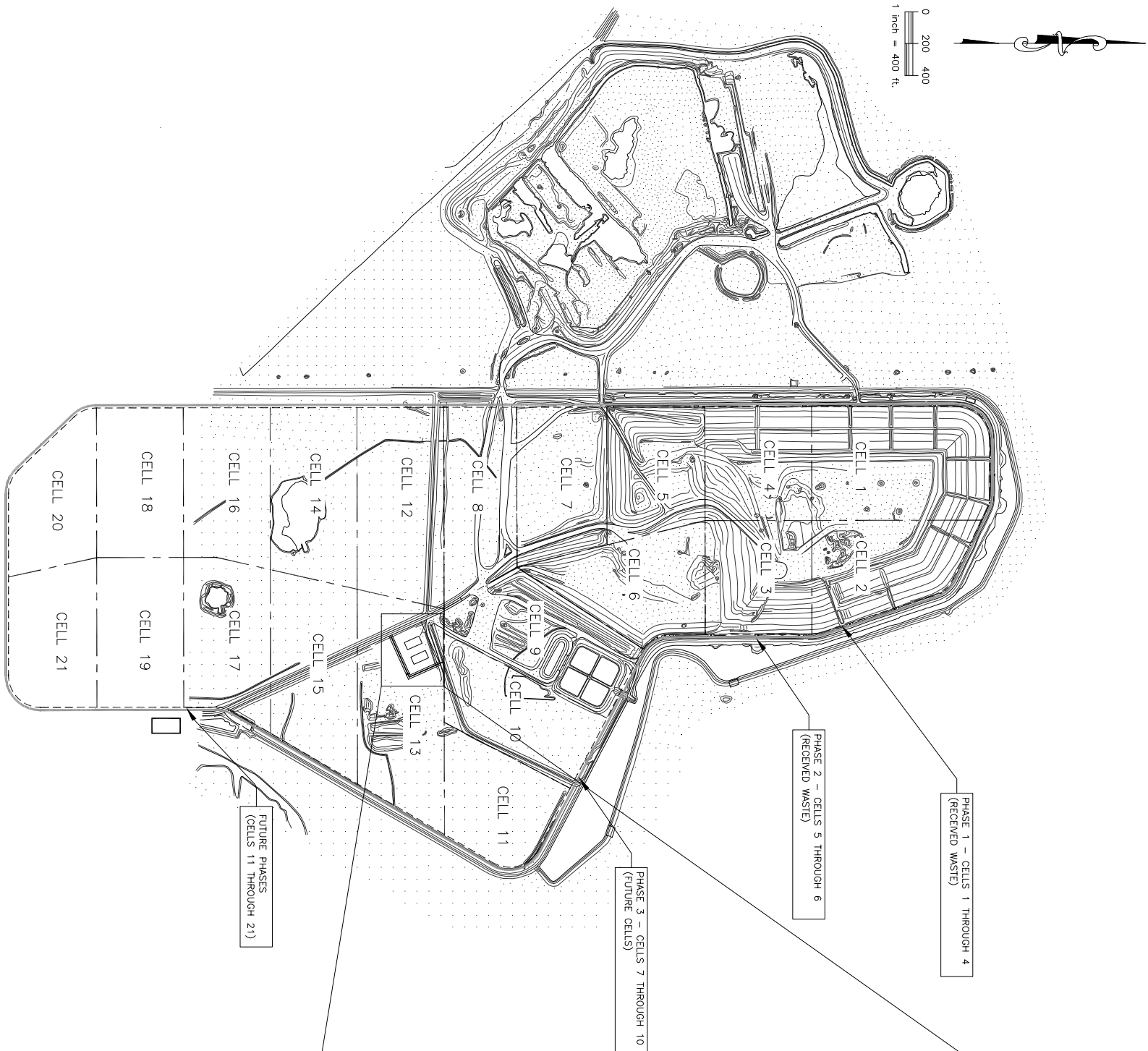
- a) The facility name, address and permit number;
- b) The quarter covered by the report;
- c) The total quantity, by category, of waste tires received at the facility during the quarter covered by the report;
- d) The total quantity, by category, of waste tires shipped from the facility during the quarter covered by the report;
- e) The total quantity of waste tires processed during the quarter;
- f) The total quantity, by category, of waste tires located at the facility on the last day of the quarter; and
- g) A list of all dates on which one or more category of waste tires exceeded the storage limit, which category was in excess, and how this condition was relieved or will be relieved.

10. CLOSURE

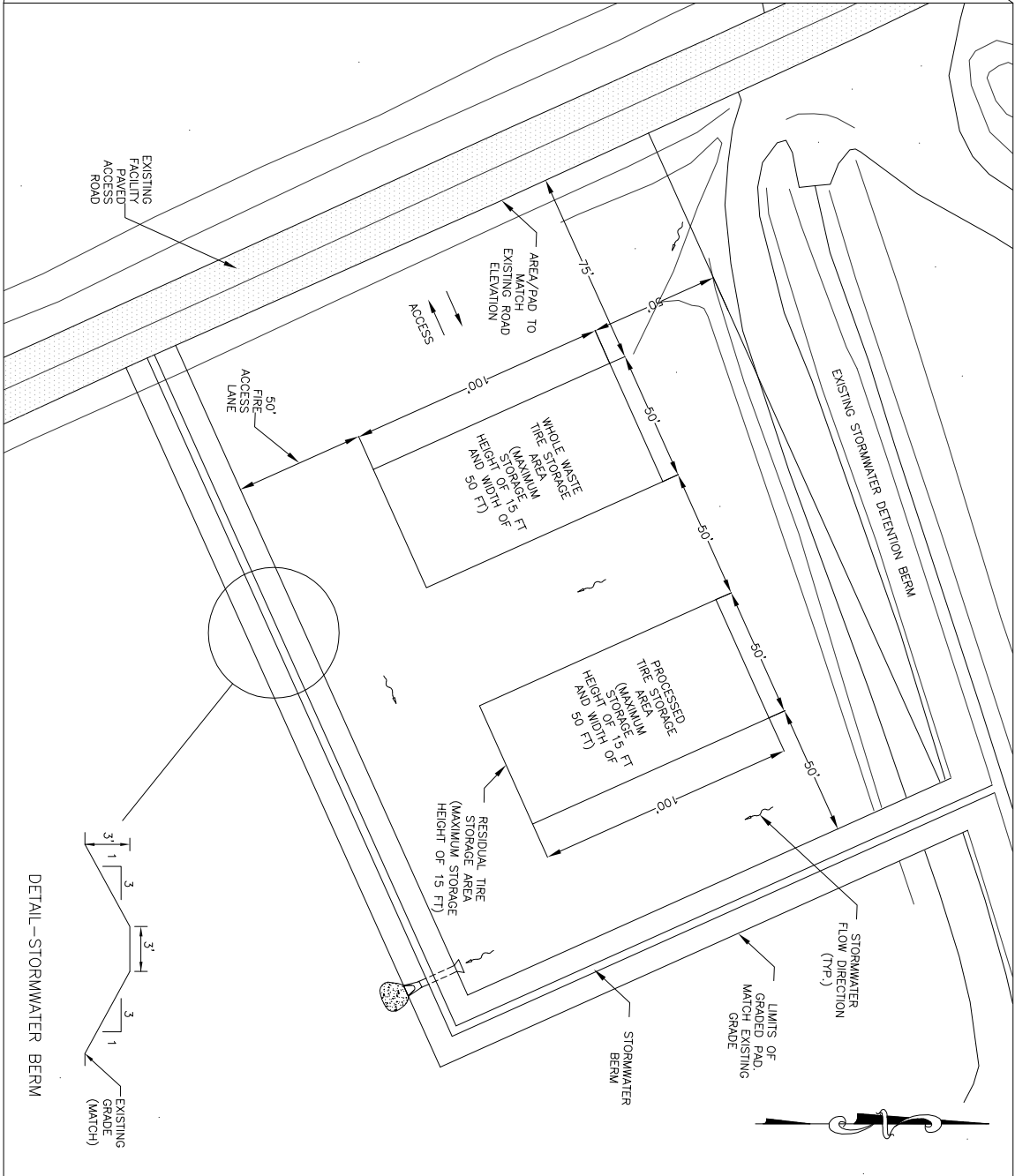
Closure of the WTSP Area will be performed together with closure of the landfill or prior to that time if waste tire storage and processing operations are no longer performed at the Facility. In closing the WTSP Area, the following activities will be performed:

- Notice will be posted at the Facility weigh scales 30 days prior to closing indicating that the WTSP Area will be closing and the date of closure. Drivers of vehicles with tire loads will be provided a flyer that includes the phone number of the Osceola County Solid Waste Office. Notice of the closing will also be provided to the Florida Department of Environmental Protection (FDEP) and the Osceola County Solid Waste Office;
- Customers with tire loads will not be accepted at the site after the official closure date;
- Remaining processed tires and residuals will be removed from the WTSP Area and disposed directly at the active disposal area. Whole tires will be further processed and disposed directly at the active disposal area or removed from the Facility by an authorized transporter and disposed or recycled at an offsite location; and
- The area will be regraded to the natural grade and revegetated.

EXISTING TOPOGRAPHIC PLAN



WASTE TIRE STORAGE AND PROCESSING AREA



SCALE: 1"=30'

- *NOTES:
1. THE WASTE TIRE STORAGE AND PROCESSING AREA WILL BE LOCATED IN THE AREA OF CELL 13 OF FUTURE PHASES, AS SHOWN.
 2. THE AREA WILL BE GRADED TO DIRECT STORM WATER AWAY FROM THE WASTE TIRE COLLECTION AND PROCESSING AREA TO THE SOUTHEAST CORNER.
 3. AREA WILL BE CONSTRUCTED WITH ROAD BASE MATERIAL AND MAINTAINED FOR VEHICLE ACCESS.
 4. 50 FT. MINIMUM SPACING WILL BE PROVIDED AROUND AND BETWEEN ALL STOCKPILES FOR EMERGENCY ACCESS.
 5. MOBILE TIRE PROCESSING (SHREDDING) EQUIPMENT WILL BE STATIONED NEAR THE SHOWN STOCKPILE LIMITS DURING PROCESSING.
 6. 40-CY ROLLOFF CONTAINER FOR RESIDUALS WILL BE STAGED NEAR THE SHOWN STOCK PILES DURING TIRE PROCESSING.
 7. CONTAINER WILL BE REMOVED WHEN PROCESSING IS COMPLETE.
 7. TOPOGRAPHIC INFORMATION OBTAINED FROM DRAWING PREPARED BY BASE MAPPING DATED JULY 25, 2009.



HDR

HDR ENGINEERING, INC.
5100 HWY 3300 AVENUE
SUITE 200
FT. LAUDERDALE, FLORIDA 33309

ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	BRENDA ANN SMITH CLARK, P.E.
PE. NO.	42754
PROJECT NUMBER	

OMNI WASTE OF OSCEOLA COUNTY, LLC.
MINOR MODIFICATION APPLICATION
J.E.D. SOLID WASTE MANAGEMENT FACILITY
ST. CLOUD, FLORIDA

SITE PLAN FOR
WASTE TIRE STORAGE
AND PROCESSING OPERATIONS

FILENAME	00C-02.DWG
SCALE	

SHEET
1

EXHIBIT A

**CALCULATION OF MAXIMUM WHOLE AND PROCESSED
TIRE STORAGE VOLUMES**

In accordance with Rule 62-711.530(2), FAC, the maximum storage limits that will be set in a waste tire processing facility permit are:

- (a) For the aggregate of whole waste tires, processed waste tires, and residuals, 60 times the daily through-put of the processing equipment being used; however, whole waste tires shall not exceed 30 times the daily through-put of the processing equipment being used; and
- (b) For used tires, 10,000 used tires stored separately from other waste tires.

Waste tire processing equipment used at the WTSP Area will be a portable Saturn Model 72-44BGHT-300HP Shredder or similar equipment. Information for this shredder equipment is provided in Exhibit B. The shredder's reported single pass through-put capacity for tires is 20 tons per hour. Assuming the waste tire processing equipment is operated from 6:00 a.m. to 5:00 p.m. Monday through Friday and 6:00 a.m. to 2:00 p.m. on Saturday, approximately 220 tons of tires could be shredded in one week day and approximately 160 tons of tires could be shredded on Saturday, based on the reported through-put capacity of the equipment. Therefore, in accordance with the maximum storage limits above, no more than 13,200 tons of the aggregate of whole tires, processed tires, and residuals, or 6,600 tons of whole waste tires could be stored at the WTSP Area at any one time.

As reported by the Rubber Manufacturers Association (RMA), the average weight of a used heavy truck tire is 110 lbs and 22.5 lbs for a passenger car, representing a passenger tire to heavy truck tire equivalent (passenger tire equivalent [PTE]) of approximately 4.9 to 1 based on weight (see backup provided in this Exhibit A). Based on the processing equipment through-put capacities noted above, the maximum number of waste tires that could be stored at the WTSP Area is 120,000 heavy truck tires or 586,666 passenger tires. Omni will not collect or store used tires separately from waste tires. Therefore, the additional storage limit of 10,000 used tires as noted in Rule 62-711.530(2), FAC does not apply. Due to storage space and operational constraints at the Facility, Omni does not plan to store the maximum allowable number of waste tires as calculated above. The maximum number of tires Omni plans to store at the Facility is further described below.

Whole waste tires and processed tires will be stored on the ground in a pile within the WTSP Area as shown on Sheet 1 of the Waste Tire Storage and Processing Plan.. The number of whole waste tires stored at the WTSP Area at any one time will depend on the type of tire (passenger or heavy truck). The maximum dimension of the whole waste tire storage area will be 50 ft wide by 100 ft long. The dimension of the process waste tire storage area will be 50 ft wide by 100 ft long.

Density information for stored waste and processed tires was obtained from the RMA and U.S. Environmental Protection Agency's Scrap Tire Cleanup Guidebook (USEPA Guidebook) (see

backup provided in this Exhibit A). As shown on pages 14 through 16 of the USEPA's Guidebook, approximately 100 passenger car tires can be loosely stacked, 150 tires if densely packed, in a 10 cy area. The RMA also reported approximately 100 passenger car tires can be loosely stored in a 10 cy area. However, RMA reported a densely packed number of 500 tires per 10 cy area. This likely represents like sized tires neatly stacked and tightly laced together. Based on WSP's experience in handling incidental waste tires at other solid waste facilities operated throughout Florida, the U.S. EPA's estimate for densely stacked tires is generally consistent with their handling experience. Therefore, the USEPA's density estimate was used. Based on the density information provided above, the number of whole waste passenger tires that could be stored in a an area 50 ft wide by 100 ft long by 15 ft high ranges from 27,800 tires if loosely stacked and 41,670 tires if densely stacked. This represents an equivalent weight of 313 to 469 tons. A lesser number of tires, yet equivalent weight, would be stored if the waste tires consist of a mixture of passenger and heavy truck tires (see example calculation below).

Weight of 41,670 Whole Passenger Tires:

$$(22.5 \text{ lbs/passenger tire} \times 41,670 \text{ tires}) / 2,000 \text{ lbs/ton} = 469 \text{ tons}$$

Weight of 2,000 Heavy Truck Tires (9,800 PTE) and 31,870 Passenger Tires:

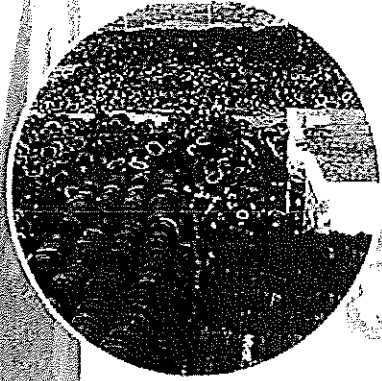
$$(110 \text{ lbs/ heavy truck tire} \times 2000 \text{ tires}) / 2,000 \text{ lbs/ton} + (22.5 \text{ lbs/passenger tire} \times 31,870 \text{ tires}) / 2,000 \text{ lbs/ton} = 110 \text{ tons} + 359 \text{ tons} = 469 \text{ tons}$$

Based on data reported by the USEPA and RMA, the density of loosely packed single pass shredded tires is approximately 600 lbs/cy. Assuming the maximum number of tires are processed and stored at the WTSP Area, the following volume would be required to store processed tires.

$$(469 \text{ tons} \times 2000 \text{ lbs/ton}) / 600 \text{ lbs/cy} = 1,563 \text{ cy}$$

Allowing for a maximum pile height of 15 ft based on Rule 62-711.540(3)(b)(3), an area approximately 50 ft wide by 100 ft long will be needed to store the processed tires. This area will allow for approximate 2H:1V sideslopes of the processed tire stockpile.

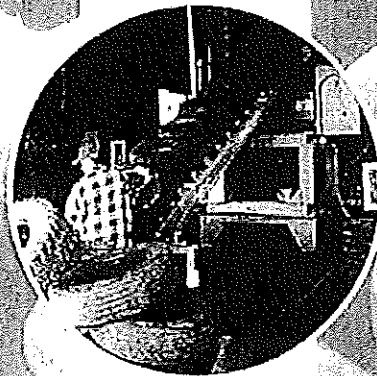
Any residuals produced during processing will be stored in one 40 cy roll-off box and transferred to the disposal area when the roll-off container is filled.



Scrap Tire Cleanup Guidebook

A Resource for
Solid Waste Managers
Across the United States

EPA-905-B-06-001



Scrap Tire Cleanup Guidebook

A Resource for
Solid Waste Managers
Across the United States

January 2006



U.S. EPA Region 5
Waste, Pesticides and Toxics Division
77 West Jackson Boulevard (DW-8J)
Chicago, Illinois 60604-3590
www.epa.gov/region5



Illinois EPA
Bureau of Land
1021 N. Grand Ave. East
P.O. Box 19276
Springfield, Illinois 62794-9276
www.epa.state.il.us

EPA-905-B-06-001

SECTION 3

Planning

Scrap tire stockpile abatement is a technical, economic, and political challenge. Cleanups involve elusive factors such as weather, stockpile contents, and underlying topography. Proper planning can limit adjustments that consume resources, thereby minimizing impacts on overall program performance and cost. This section presents critical planning considerations for both an overall cleanup program and individual abatement projects.



STOCKPILE IDENTIFICATION AND MAPPING

Stockpile identification is the first step in defining the magnitude of the scrap tire stockpile problem in any jurisdiction. The most effective identification methods have involved all levels of government and enforcement as well as industry groups and citizen reports.

State Government. State solid waste and public health agencies play a focal role in scrap tire stockpile identification efforts. These agencies have a broad range of organizational structures. Centralized agencies deploy personnel to each region of the state to work with county, city, and local officials in identifying and characterizing sites. Other agencies either designate one person in each regional office to identify stockpiles or distribute the responsibility to all staff based on their geographic or industry area of expertise. Smaller identification groups are easier to train and gain greater knowledge through in-depth experience. However, these advantages can be offset by greater travel time, cost, and difficulty in making regular visits to examine changing site conditions.

One effective compromise is to use a broad base of individuals to identify stockpiles in their service areas and then task a smaller group to characterize and prioritize stockpiles. Contractors or consultants may be useful for supplementing agency resources in the early stages of program implementation. Finally, other state or local authorities can be leveraged, such as forestry, park, wildlife, natural resource, and police agencies. Such authorities have field personnel with extensive knowledge of rural areas that often harbor stockpiles.

County and Local Governments. Most effective programs have drawn heavily upon county, city, and local governments to identify stockpiles. Police, code enforcement, mosquito control, solid waste management, public health, park, firefighting, forestry, and game and fish personnel have all helped to identify stockpiles encountered during their normal activities.

One state sent surveys to all county and local governments (including those for municipalities with over 1,000 people) during initial scoping activities. The survey asked for stockpile sites to be identified by location, street address, and owner. Cooperation in such efforts can be enhanced by the survey objectives and methodology and by explaining the ability of the program to help local governments abate identified sites without consuming local resources.

Additional Identification Methods. Other creative methods can be used to support identification efforts, including the following approaches:

- A toll-free telephone number can be established to encourage residents to report stockpiles and illegal dumping activities. Local governments and industry organizations can be leveraged to disseminate information about the program. Many large stockpiles are found based on information provided in citizen complaints.

- Both public service announcements and promotion of initial abatement activities encourage reporting of additional stockpiles.
- Committees consisting of representatives of tire dealers, salvage yards, and haulers can reach out within their respective industries to encourage stockpile identification.

Required Information. Once a stockpile is identified, characterization is conducted to gather information required for prioritization, stabilization, and abatement activities. The following information should be considered, especially for larger sites:

- Location, including street address, city, county, and global positioning system (GPS) coordinates
- Owner or operator, including name, address, telephone number, and involvement
- Stockpile characteristics such as dimensions, tire sizes, age, the presence of rims, possible compaction, existence of lacing (see photo at right) or stacking, the percentage of whole tires and shreds, and the presence of other wastes
- Site characteristics such as stockpile spacing, soil characteristics, topography, access, and drainage channels as well as nearby surface water, residences, businesses, and population densities. (Nearby schools, airports, and other large public facilities should also be identified to help define environmental impacts.)
- Site conditions impacting fire control, such as access roadways, water resources, perimeter and internal fire lanes, trees, and brush

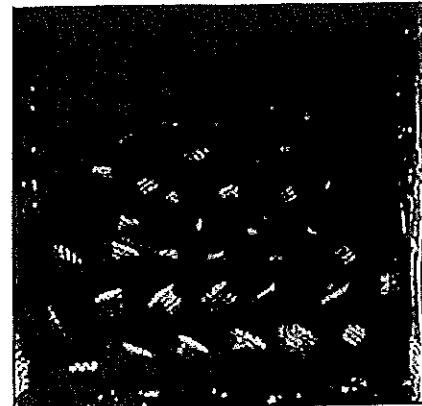


Photo courtesy of Todd Marvel, Illinois EPA

The information on site characteristics and conditions is useful for site stabilization and fire control planning for larger sites. An example site characterization form is provided in the Appendix of this guidebook. For smaller sites, only the location, owner or operator, and stockpile characteristic information is needed.

Mapping. Stockpile mapping offers political, technical, and economic benefits. It allows public officials and citizens to understand the extent of the problem, as it graphically illustrates the broad distribution of scrap tire sites in the state. From a technical and economic standpoint, mapping enhances efficiency by supporting coordination of site-related activities such as inspections. In addition, contractor efficiency can be maximized by addressing several nearby sites under a single abatement contract if site access can be achieved concurrently. The combined volume encourages contractor interest, and the approach decreases mobilization and demobilization costs. Example stockpile maps prepared using GIS are shown on the following page.

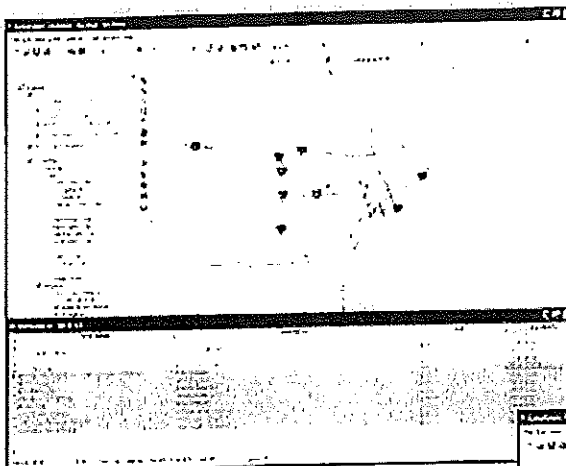
Mapping Tip

Review of site background information, such as aerial photographs, topographic maps, or tax maps, before the scrap tire quantity is estimated can reduce the effort needed for field mapping. This information is often available in government or other Internet-accessible databases.

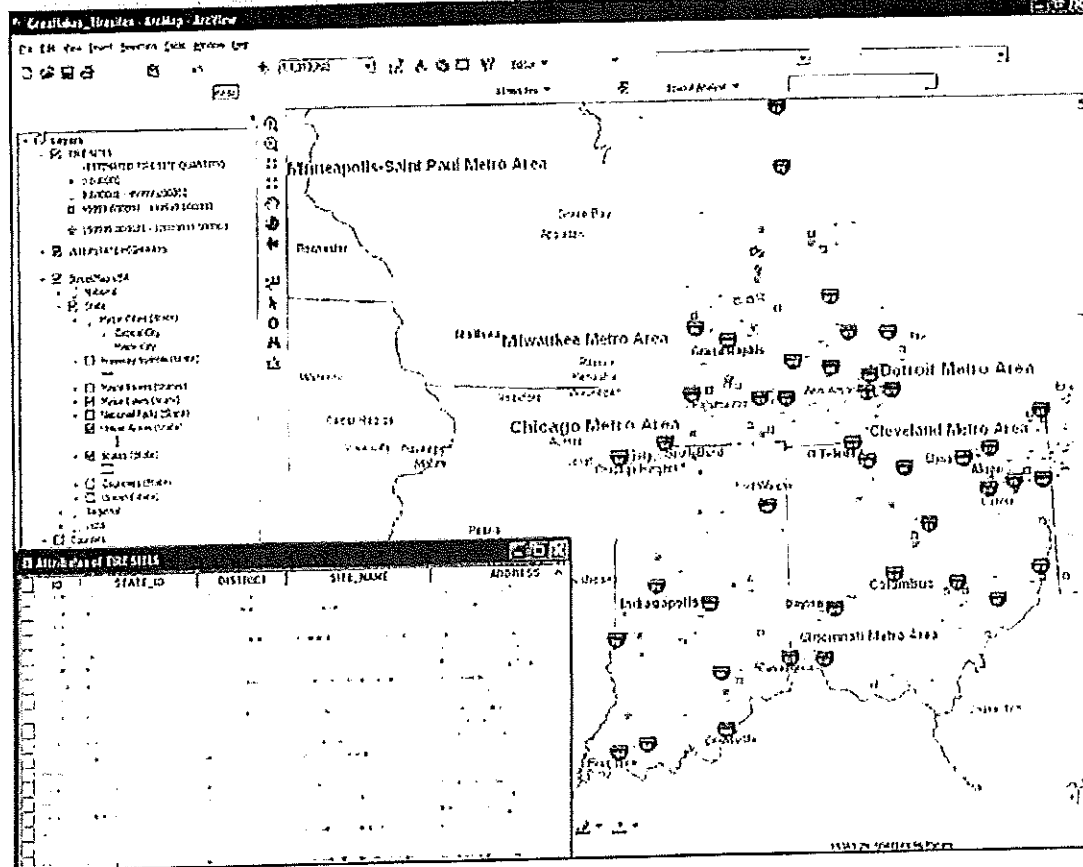
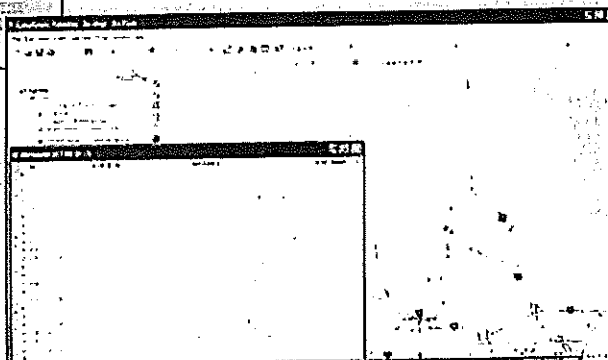
QUANTITY ESTIMATION TECHNIQUES

Following stockpile identification, the scrap tire quantity is estimated for prioritization, program planning, budgeting, and contract management purposes. Stockpile estimating is relatively simple in principle, but can be impacted by many variables. Many early estimates were performed using the "gazer" technique. For example, a person would stare at a stockpile and state that it "looked like

Using GIS to Map Stockpile Sites



U.S. EPA Region 5 initiated a cooperative effort to map all the remaining stockpiles in several states. Stockpile sites are being identified based on GPS coordinates and other site features in cooperation with state and local authorities. The information collected was entered into a database that was used to develop GIS maps with color-coded pile size delineations. Such maps have been created for Alabama, Connecticut, Indiana, Michigan, New York, Ohio, and Pennsylvania.



about a million tires" when in reality it could have contained between 20,000 and 20 million tires. Some people still use this technique, resulting in estimates with extremely large margins of error.

Some basic science has been added to the "gazer" technique, resulting in significant improvements in estimate accuracy. During initial site identification and examination, the dimensions of each stockpile segment should be measured using one of several techniques, including a long tape, a measuring wheel, or a calibrated pace. A 100-foot, fiberglass tape requires two people for efficient use and is preferable for uneven terrain or in cases likely to require court testimony. A large-diameter measuring wheel can be used on firm, level terrain but is unusable on rough or muddy ground. A calibrated pace can be used efficiently on most terrain, but its accuracy depends on the ability of the measurer to maintain a uniform pace. Taking measurements from the midpoint of the pile slope simplifies subsequent calculations. In addition, photographs should be taken during field inspections to document site conditions, to monitor changes in site conditions between inspections, and to serve as legal evidence. An example stockpile characterization form that can be used to collect data is provided in the Appendix of this guidebook.

Estimating stockpile depth is often a challenge because the sides are sloped and not easily measured. One technique (see figure at right) is to have a person of known height stand as close to the pile as possible while an observer stands back and measures the pile depth in multiples of the first person's height. The observer should be at least 10 times

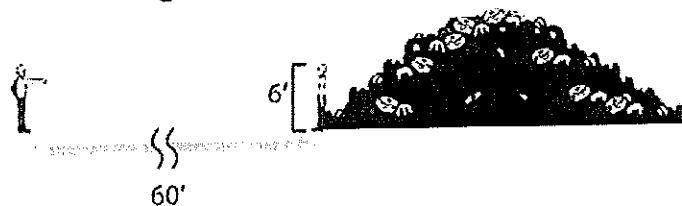
the estimated pile depth away to minimize angle distortion. A spotter's scope or compact measuring device can also be used. A large pile should be climbed, and the top of major pile segments should be walked to observe top contours, pile characteristics, dimensions, and firmness (which reflects density variations associated with compaction, aging, and lacing). Tires in stockpiles are irregularly shaped, flexible, and unstable, so extreme care should be taken when climbing a tire pile.

Stockpiles pose other health risks that should be considered while estimators are on site. Scrap tires can support breeding of mosquito species that are capable of serving as vectors for potentially fatal diseases such as eastern equine encephalitis, West Nile virus, and dengue fever. While estimators are on site, protective clothing and mosquito spray should be used to minimize exposure. In addition, stockpiles typically harbor rodents and snakes, so estimators should be observant and move cautiously.

For a large stockpile, aerial photographs can be used to define its horizontal dimensions, but a scale must be established based on nearby objects. To be effective, aerial photographs must be taken vertically to avoid dimensional distortion. Depth and density estimation requires ground observation. Detailed aerial surveys can be conducted, but the ground topography under the pile must be known or assumed. Aerial surveys are expensive, and their accuracy is questionable unless a pile is deep enough to reduce the margin of error associated with surface depth irregularities. Ground surveys have also been performed with volume-integrating software, but they can be expensive and may not offer greater accuracy than manual measurements.

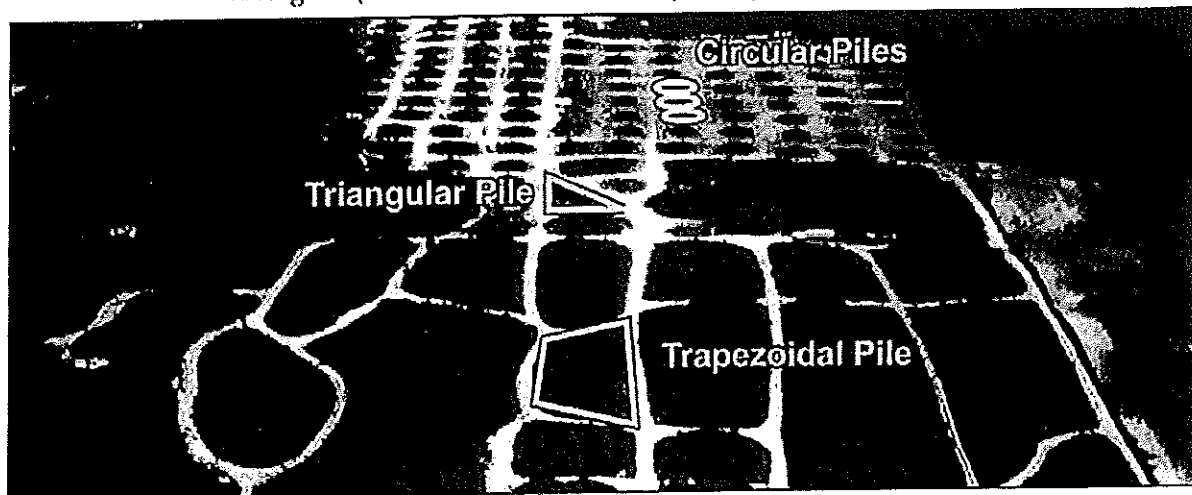
As a first step, the stockpile volume is estimated using calculations based on the dimensions. In some cases, irregular shapes can be converted into rectangles, circles, or other simple geometric shapes to simplify calculations without impairing accuracy. In other cases, a single irregularly shaped pile can be measured as two or more connected rectangular segments with different dimensions. If dimensions have been measured from the midpoint of the slope, the volume of a rectangular pile is simply the product of the length, width, and depth. Although this method is not geometrically perfect, the simplification does not significantly impact the total volume estimate.

Estimating Stockpile Depth



The volume of other common stockpile shapes can be calculated using the following formulas:

- Circle: $\pi r^2 d$ or $3.14 \times \text{circle radius} \times \text{circle radius} \times \text{depth}$
- Triangle: $\frac{1}{2} lwd$ or $\frac{1}{2} \times \text{length} \times \text{width at base} \times \text{depth (from base to peak of pile)}$
- Trapezoid: $\frac{1}{2} l (w_1 + w_2) d$ or $\frac{1}{2} \text{length} \times (\text{width at base} + \text{width at top}) \times \text{depth}$



The second step in estimating the tire quantity in a stockpile is determining the pile density, or the quantity of scrap tires contained in each cubic yard of the pile. Volume is translated into quantity or weight through assignment of a density. Because most tire stockpiles contain mixtures of various tire sizes, density is normally expressed in terms of the passenger tire equivalent (PTE), which is equal to 20 pounds by definition. Most scrap tires have roughly equivalent densities when expressed in terms of PTE/cubic yard. For instance, a medium truck tire weighs approximately 100 pounds (5 PTE) and occupies a volume equivalent to four to five passenger tires in a given stockpile. Because most abatement activities and other considerations are based on weight, the equivalency more accurately reflects future tire use, processing, and disposal.

The density of loose, shallow, whole-tire stockpiles is normally about 10 PTE /cubic yard but can range from 8 to 27 PTE/cubic yard. Densities below 10 PTE/cubic yard reflect rimmed tires that do not collapse but account for only the rubber weight under the assumption that rims will be removed before tire transport. Stacking or lacing increases the effective density to 12 to 15 PTE/cubic yard for passenger tires, and 13 to 18 PTE/cubic yard for medium truck tires. The highest density range rarely occurs but was encountered in a 40-year-old stockpile in a canyon that was over 100 feet deep near Modesto, California; the very hot climate caused the tires to be more flexible and easily compacted. Other factors that impact the density of whole-tire stockpiles are shown in the table on page 15.

The density of shredded-tire stockpiles can range from 30 to 90 PTE/cubic yard (600 to 1,800 pounds/cubic yard). The lower density range represents shallow, uncompacted piles of uniformly large particles such as single-pass shreds. The higher range represents deep stockpiles of finer tire-derived fuel (TDF) that has been heavily compacted by repeated movement of heavy equipment during stacking. The highest range represents compacted shreds with extensive dirt contamination. Major factors that impact shredded-tire stockpile density are shown in the table on page 15.

Once the stockpile volume and density have been estimated, the tire quantity (or weight) is calculated by multiplying the volume (cubic yards) by the density (PTE/cubic yard). The result is a tire quantity expressed as PTE. The tire quantity can also be expressed as a weight (tons) by dividing by

Factors Affecting Tire Density

Whole Tire Stockpile	Shredded Tire Stockpile
<ul style="list-style-type: none"> • Depth: Increases the compaction of tires in a pile and therefore increases density • Age: Allows additional compaction over time and therefore increases density • Heat: Increases the flexibility of tire rubber, thereby increasing compaction and density 	<ul style="list-style-type: none"> • Shred size: Smaller shred size generally increases density. • Wire content: Wire removal decreases density. • Depth: Depth increases overburden compaction and density. • Equipment movement: Equipment movement on ramps or top surfaces during stacking significantly increases density as well as the probability of auto-ignition within a pile.

100 PTE/ton. A schematic of a simple stockpile site is shown in Exhibit 1 and the quantity calculation logic is summarized in Exhibit 2.

Although the estimating methodology described above has been successfully applied to hundreds of scrap tire stockpiles, the following factors may affect its accuracy:

- **Topography:** The underlying topography can significantly affect pile volume and tire quantity but may not be apparent from surface observations. Larger tire piles are more difficult to estimate because they may conceal ravines or pits filled with tires. Piles located on hillsides are also difficult to estimate because the hillsides may curve or become steeper beneath the piles.
- **Nonuniformity:** A pile may appear to consist of loose tires on the surface, but laced tires or shreds may be present in the pile, significantly increasing pile density and tire quantity.
- **Contamination:** Piles can be contaminated with water, soil, automobile parts, or other waste that may not be visible from the surface. Water and dirt can significantly increase pile density and abatement costs. Also, the presence of whole vehicles or chemical-filled drums can complicate tire retrieval, especially if the vehicles are loaded with tires or the drums contain hazardous wastes.



Photo courtesy of Allan Lawster, Virginia DEQ

STACKPILE PRIORITIZATION

With the understanding that resources are limited, stockpile stabilization, abatement, or both should be initiated following a prioritized sequence based on the comparative hazards posed by various sites (see Section 1). A prioritization system should reflect current and potential impacts on citizens and the environment, particularly impacts on sensitive receptors such as schools, hospitals, daycare centers, and nursing homes.

One prioritization method uses stockpile size as a multiplier because it typically magnifies the impacts of a tire fire. The multiplier ranges should reflect the quantities of tires in the piles being prioritized. For example, the following size factors could be used for stockpiles with the numbers of tires indicated:

- Less than 100,000 tires = 1
- 100,000 to 250,000 tires = 2
- 250,000 to 1,000,000 tires = 3
- More than 1,000,000 tires = 4

Exhibit 1. Example Stockpile Site

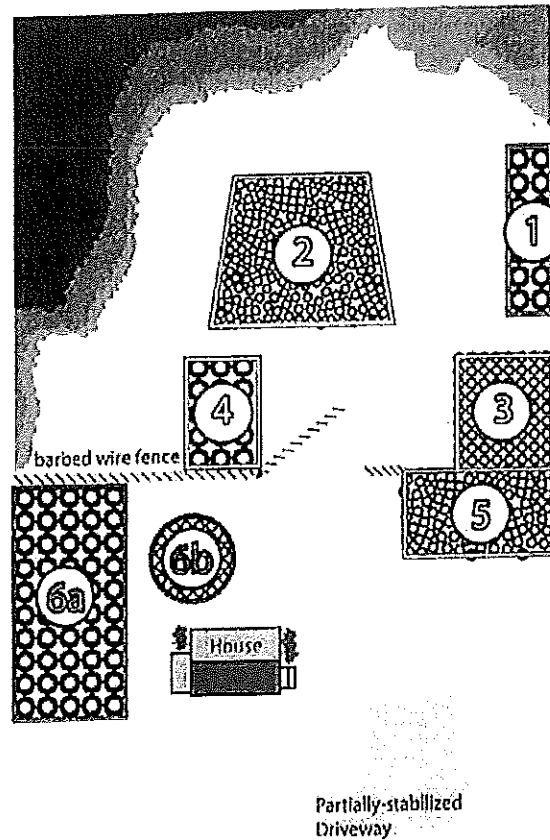


Exhibit 2. Example Tire Quantity Calculation

Pile No.	Description		Dimensions (yard)			Volume (CY) or No. of Tires	Density ³ (PTE/CY)	Quantity	
	Tire ¹	Pile ²	Length	Width	Height			PTE or No. of Tires	Tons ⁴
1	T	Horiz. Stacked	31	8	1	186	15.0	2,790	28
2	P	Loose	30	30/20	3	3,700	10.0	27,000	270
3	P	Stacked	20	15	1	300	13.0	3,900	39
4	T	Horiz. Stacked	10	15	1	150	15.0	2,250	23
5	P	Loose	25	15	1	375	10.0	3,750	38
6a	T	Horiz. Stacked	35	15	1	2,100	15.0	31,500	315
6b	P	Loose	10	10	2	200	10.0	2,000	20
TOTAL								73,190	449.5

CY = Cubic yards
PTE = Passenger tire equivalent

¹ Truck (T), passenger (P), off-highway (OTH), shredded - coarse (SC) or shredded - fine (SF)

² Loose, stacked, horizontal stacked, or faced

³ Density ranges from 8 to 27 PTE/CY; normally about 10 PTE/CY for loose, shredded, under-tire stockpiles

⁴ To calculate weight, use 100 PTE per ton.

Factors to Consider When Evaluating Impacts of Scrap Tire Stockpiles

IMPACT	Air	Water	Population
ISSUE	Impact of fire plume on residents, businesses, and regional air quality	Impact of contaminants in oil and residual ash on surface water or groundwater	Impact of existing stockpile on area residents
FACTORS TO CONSIDER	<ul style="list-style-type: none"> • Prevailing wind direction • Stockpile characteristics such as height, trees and brush, and fire lanes • Surrounding land use • Sensitive receptors such as schools, airports, and large public facilities (within 0.5- and 5-mile perimeter) 	<ul style="list-style-type: none"> • Soil characteristics such as permeability • Aquifer characteristics such as water table depth and drinking water use • Site drainage • Surface water proximity • Sensitive receptors such as wetlands, fisheries, or endangered species • Stockpile characteristics 	<ul style="list-style-type: none"> • Population proximity • Mosquito species • Identified local/regional mosquito-borne diseases • Rodent/snake infestation • Stockpile characteristics

The potential impact on the general categories of air, water, and population are evaluated independently (based on data from the initial site evaluation) using a scale of 1 to 10 with 10 indicating the greatest potential impact. These three ratings are added and multiplied by the size factor. Factors to consider when evaluating the impact of a stockpile to air, water, and population density are shown in the figure above. Stockpile size is an important consideration, but impact is the controlling issue.

Stockpile sites are then prioritized based on the resulting rating totals, with the highest rating representing the highest priority. Sites generally fall into rating groups with numerical separations between the groups. Within groups, rating differences are generally small, and the abatement sequence can be based on site access, contractor availability, markets, or location. The figure below shows an example of the prioritization method.

Consistency is an extremely important component of any stockpile prioritization system, so the smallest possible number of evaluators should be used. Nevertheless, it can be beneficial to have two or three evaluators compare their ratings so that subjective inconsistencies can be identified and corrected. Ratings generated by a variety of people can be reviewed by a small, central staff to increase the consistency of the ratings.

Example Stockpile Prioritization

Site	Air Impact	Water Impact	Population Impact	Size	Site Score	Prioritization
A	9	10	9	4	112	High Priority
B	10	9	10	3	87	
C	5	9	5	2	38	Medium Priority
D	8	2	9	2	38	
E	4	4	4	3	36	
F	4	8	4	2	32	
G	8	2	7	1	17	Low Priority
H	1	2	1	4	16	
I	2	2	10	1	14	
J	1	2	2	2	10	

Stockpile Score = (Air Impact + Water Impact + Population Impact) * Stockpile Size

Coordinating Scrap Tire Abatement with Landfill Remediation in Illinois

Illinois EPA recently directed an abatement of its largest scrap tire site that was coordinated with a nearby state-funded landfill remediation project. The Coultas Recycling site in Danville, Illinois, contained about 1 million scrap tires. The inactive H&L landfill about 3 miles away posed environmental problems for the City of Danville and was being properly closed and capped by the Illinois EPA. A gas transmission system was required below the impermeable cap to maintain its integrity. The stockpiled tires were shredded on the Coultas Recycling site, transported to the landfill site, and spread over the top of the landfill (within geotextile encapsulation) to serve as a gas transmission medium under the impermeable cap. The shred layer was tapped to allow gas removal. One million tires were processed and removed from the stockpile site in 9 months with no impact on existing markets and at a lower cost than that of alternatives.

Some states use independent contractors or consultants to manage or perform stockpile prioritization in order to limit political influences. Using a technically sound prioritization process performed by unbiased evaluators also improves program effectiveness and efficiency.

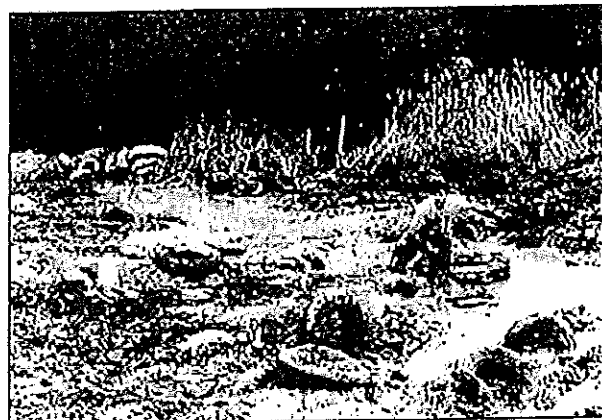
MARKETS

Something has to be done with the scrap tires that are removed from stockpiles. Many states have constructively used scrap tires removed during remediation projects in civil engineering or other applications. Done properly, stockpile abatement can help to develop new markets or add supply volumes to existing markets. Done improperly, it can negatively impact existing markets and processors, even driving current-generation tires into stockpiles or landfills. Markets require various levels of processing ranging from shredding to metal and fiber removal, thus adding expense. Although it is not the preferred option, scrap tires may also be landfilled if their condition is not suitable for available markets.

Stockpiled tires are often contaminated with water, dirt, or other foreign materials that limit potential markets and increase processing costs. Some cement kilns that use whole tires and that can accept limited water and dirt contamination represent a market, but kiln capacity and fuel weighing can be negatively impacted by substantial contamination.

Because contamination can damage processing equipment and increase maintenance expenses, contractors try to minimize damage by producing large tire shreds (for example, 4 inches or larger without steel belts removed) for civil engineering applications. Examples include large highway embankment or lightweight fill projects that can consume 500,000 to 1,500,000 tires per project. In use of tire shreds for aggregate replacement during landfill construction, a range of tire shred sizes may be used, depending on the construction details of the liner and drainage system. Examples of landfill applications include use of tire shreds for daily cover, leachate collection layers, surface water drainage layers, and gas collection channels. Large chips with minimal processing requirements minimize abatement costs if they are technically acceptable.

Proper retrieval of tires from uncontaminated stockpiles can yield clean tires that can be processed into TDF or drain field products. In some cases, contractors choose to accept higher equipment maintenance costs and downtime to process dirty tires under abatement contracts. However, most crumb rubber producers generally do not accept abatement tires because of their impact on equipment and product quality.



Some legislative or regulatory measures require that all abatement tires be constructively used. Such a requirement can have the following impacts:

- **Damage of processing equipment:** Processing heavily contaminated or partially burned tires can cause equipment problems that delay stockpile abatement.
- **Market distortion:** Driving abatement tires to existing markets can displace products made from current-generation tires. This displacement can create market instability, cause processor attrition, and force current-generation tires into landfills or stockpiles.

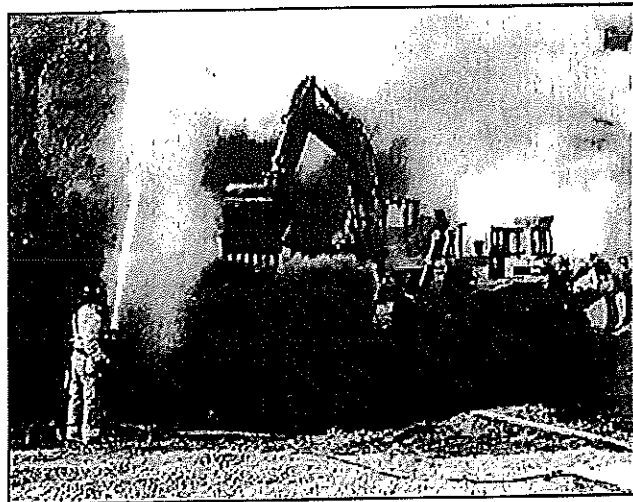


Photo courtesy of Todd Thibault, California DWR

Creating new markets for abatement tires or rewarding contractors for creation of such markets is a critical component of an effective scrap tire program. Examples might include working with the state Department of Transportation (DOT), landfill owners and operators, and state agencies conducting landfill closures to identify scrap tire projects. Creating and specifying a new market can decrease abatement costs. At a minimum, the maximum percentage of existing markets displaced by abatement activities should be controlled even if it means extending cleanup schedules or allowing product storage under monitored conditions.

PROPERTY ISSUES

Scrap tire stockpiles are generally located on property that is owned and controlled by one or more individuals. Before a scrap tire remediation project begins, it is essential to obtain either a written property access agreement from the landowner or a court order granting property access for the purpose of tire removal. At many sites, a property boundary survey is also necessary to ensure that remediation work does not inadvertently extend over onto adjacent properties. If additional properties are involved, additional property access agreements or court orders will be needed.



Photo courtesy of Gavin Adams, Alabama DFM

The following issues should be considered in dealing with properties :

- **Utilization:** A property can contain buildings, other structures, and utilities that would be useful to a contractor during on-site activities. If any of these items are to be used, a written agreement establishing the usage conditions, obligations, and compensation can prevent subsequent misunderstandings.
- **Damage:** States have been sued for damage done by contractors acting as their agents. In some cases, the damage has been done by others prior to initiation of cleanup activities. As a preventive measure, complete and dated sets of photographs before, during, and after site abatement is useful for documenting site conditions.

- **Restoration:** Water in tires and rain create muddy conditions in unstable soil under a stockpile. Heavy equipment can create deep ruts, and water runoff can erode surface soil. After tire retrieval, contractors are generally required to level heavily rutted land. In most cases, re-establishing vegetation will control erosion.

Recognizing a property's value while obtaining and maintaining the landowner's cooperation facilitates abatement operations. If the property owner will not cooperate, a court order must be obtained to enter the property and remove the scrap tires. State legislation can aid this process if laws are passed to create an administrative process for ordering scrap tire cleanups. One example is Ohio Revised Code 3734.85, which can be found at <http://www.ohio.gov/government.htm>.

COMMUNICATIONS

Stockpile abatement involves many groups, including contractors, local governments, politicians, and the press. Informing and coordinating these groups are critical components of successful scrap tire programs and abatement projects.

Contractors. Any special abatement project requirements should be clearly defined in detailed plans and specifications provided to prospective contractors prior to the bidding process. Examples of items that should be addressed in such plans include the following:

- | | |
|---------------------------------------|--|
| • Site description | • Pile removal sequence |
| • Tire quantity estimate | • Stabilized access and perimeter roadways |
| • Tire pile length, width, and height | • Control of vegetation, mosquitoes, and run-off |
| • Operating procedures | • Water source and distribution |
| • Fencing | • Fire plan |
| • Lighting | • Utilities |
| • Security | • Progress reporting |
| • Fire lanes | |

Many contractors have developed their own abatement methods to optimize the efficiency of cleanup operations based on years of experience. Experienced contractors should be invited to suggest alternative approaches. An initial description of the project should be developed to provide a sound foundation for project communications and to minimize the need for discussion of pre-planned activities. Example pre-bid documents prepared by the States of Iowa and Illinois are available at <http://www.epa.gov/reg5rcra/wptdiv/solidwaste/tires/guidance/index.htm>.

Elected Officials. Local and state elected officials are instrumental in creating and maintaining abatement programs. Providing updates on program implementation and abatement projects is important. Digital photographs, videotapes, or aerial photographs of sites before, during, and after abatement can be sent to state legislators in the district to maintain communications



Photo courtesy of Rob Lutz, Ohio EPA

and build support. Inviting elected officials to see stockpile sites before and after cleanup also creates a good public relations opportunity.

Local Governments. Local administrators and police and fire departments can provide critical support services at little or no cost if they are included in project communications. Informing these groups about project plans and associated benefits to the community enhances cooperation. Discussing security and fire control measures with local departments before the project starts increases the probability of a successful response if needed. A contact list that includes emergency response contacts and procedures should be provided to all project participants.

Press. Publicity allows citizens to understand an abatement program and the value received for public fees. In addition, publicity allows politicians and program participants to be recognized for accomplishing removal objectives. However, drawing attention to stockpile abatement projects can have undesired effects. Many fires are actually started by site operators or local residents in the wake of publicity over cleanup activities. One of the largest tire fires in Canada, which involved an estimated 10 million tires, was started by teenagers attracted to the site by local publicity. One approach is to issue a press release highlighting the last scrap tire being thrown onto a truck by a local community leader; the release can include site photographs taken before and during abatement.

EXHIBIT B

TIRE PROCESSING EQUIPMENT INFORMATION



GRANUTECH-SATURN SYSTEMS CORPORATION
201 East Shady Grove Road
Grand Prairie, Texas 75050
PHONE: 972/790-7800
FAX: 972/790-8733
e-mail: sales@granutech.com

SATURN Model 72-44BGHT-300HP SHREDDER

Data Sheet

The Saturn shredder features twin counter-rotating shafts operating at slow speed and very high torque to reduce material by means of shearing and tearing. Slight shaft speed differential contributes to the cutting action while reducing particle sizing. The Saturn shredder is driven by a high displacement hydraulic motor, which in turn is powered by Saturn's proprietary open loop hydraulic drive system. Automatic overload detection initiates cutter shaft reversal to eliminate damage to the shredder components.

SPECIFICATIONS:

- Shredder Inlet Opening 72" x 44"
- Shredder Outside Dimensions 152" x 73" x 43"
- Power Unit Dimensions 144" x 90" x 69"
- Shredder Weight 28,000 pounds
- Power Unit Weight 11,000 lbs. (dry)

DETAILS:

Shredder

- Cutter Shaft Torque: Fast – 48,915 ft./lb.
Torque: Slow – 48,915 ft./lb.
- Cutter Speed Fast Shaft – 24 RPM
Slow Shaft – 21.4 RPM
- Cutter Force Fast: 52,176 lbs.
Slow: 52,176 lbs.
- Shaft Diameter 8" hexagon (across flats)
- Cutter Diameter 22.50" @ hooks

Power Unit – Open Loop, Skid Mounted

- Electrical Power 300 HP (3 x 100)
- Hydraulic Flow 238.5 GPM
- Rated Pressure 3000 PSI

GRANUTECH SEPARATION SYSTEMS

GRANUTECH-SATURN SYSTEMS CORPORATION
201 East Shady Grove Road
Grand Prairie, Texas 75050
PHONE: 972/790-7800
FAX: 972/790-8733
e-mail: sales@granutech.com

ELECTRICAL:

Operator initiated pushbutton controls, featuring Allen Bradley PLC. Motor controls include primary disconnect with short circuit protection, full load contactors, and electronic overload detection. Control power derived from a single-phase transformer. All components assembled and wired in a NEMA enclosure.

OPTIONAL:

- Mounting and wiring of control and motor starter panels on hydraulic power unit
- Shredder infeed hopper
- Shredder support stand
- Infeed and discharge conveyors

APPLICATIONS:

- Tires – up to 20 T/HR
- MSW - up to 30 T/HR
- Non-Ferrous Metals – up to 12 T/HR
- Plastic – up to 12 T/HR

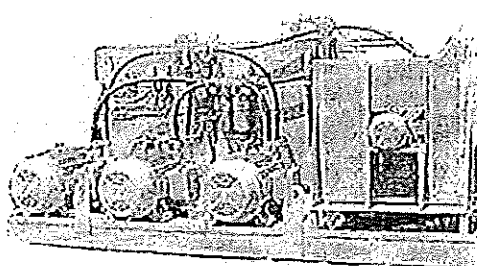
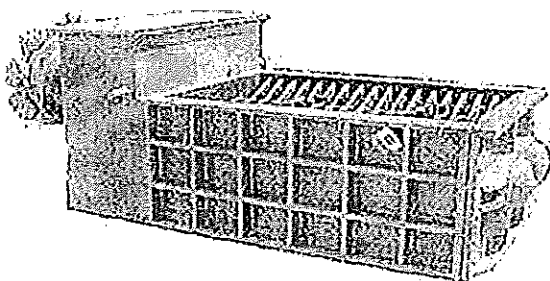
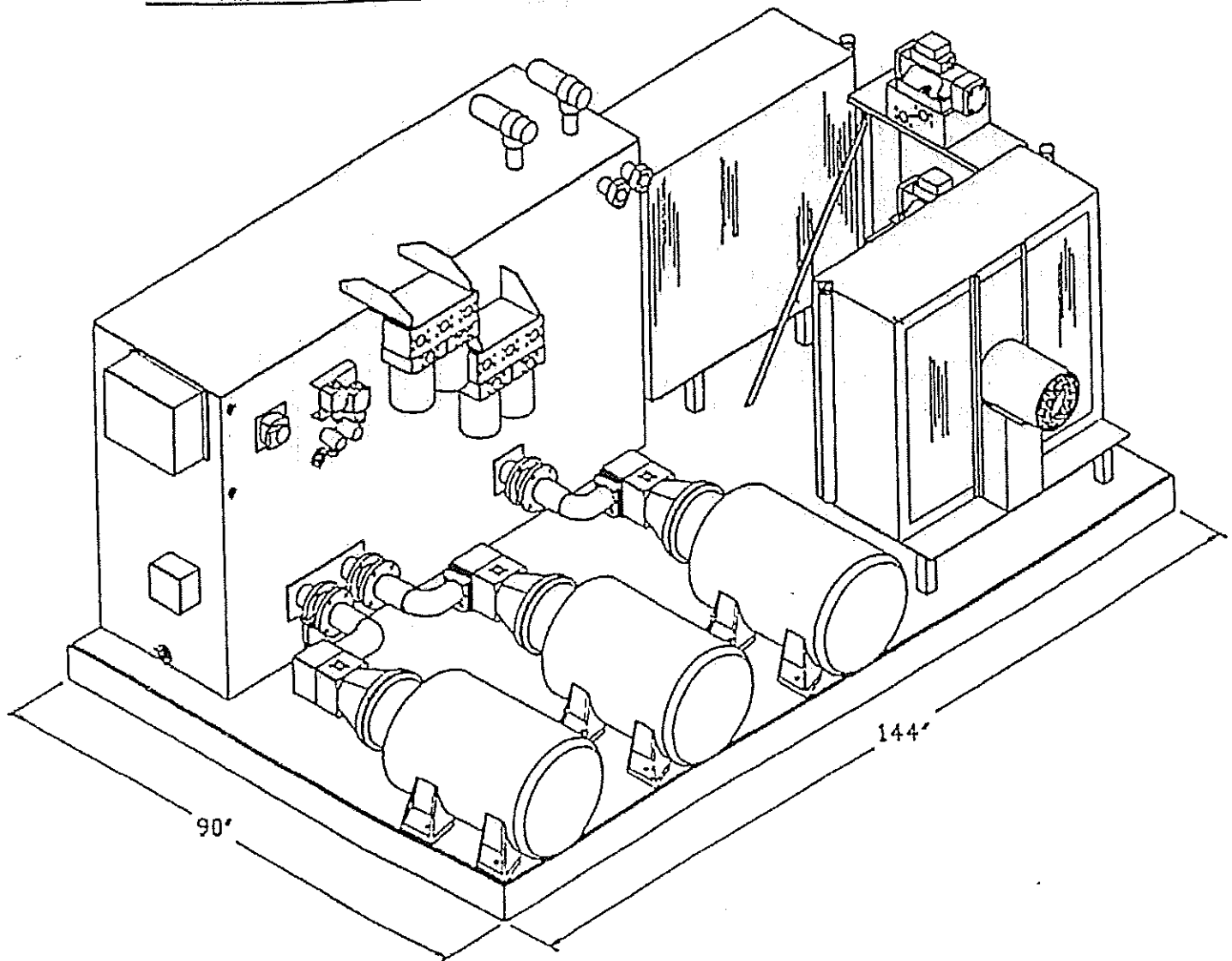


PLATE 1



Granutech-Saturn Systems Corporation
201 East Shady Grove Road ♦ Grand Prairie, Texas 75050
Phone: (972) 790-7800 ♦ Fax: (972) 790-8733
email: sales@granutech.com

300 H.P. HYDRAULIC POWER UNIT



APPROVED:

100

FORM NO: EF-A-1000-H

SATURN MOBILE TIRE SHREDDERS

Saturn has designed and built mobile shredders in the past. We are now manufacturing a new completely self-contained portable tire shredding system.

Saturn's new design features:

- ♦ Self-stowing discharge conveyor
- ♦ Infeed conveyor that will attach and feed from either side of mobile unit
- ♦ Infeed conveyor that rests atop shredder when in travel mode
- ♦ Easy dismantling and reassembly as stationary system

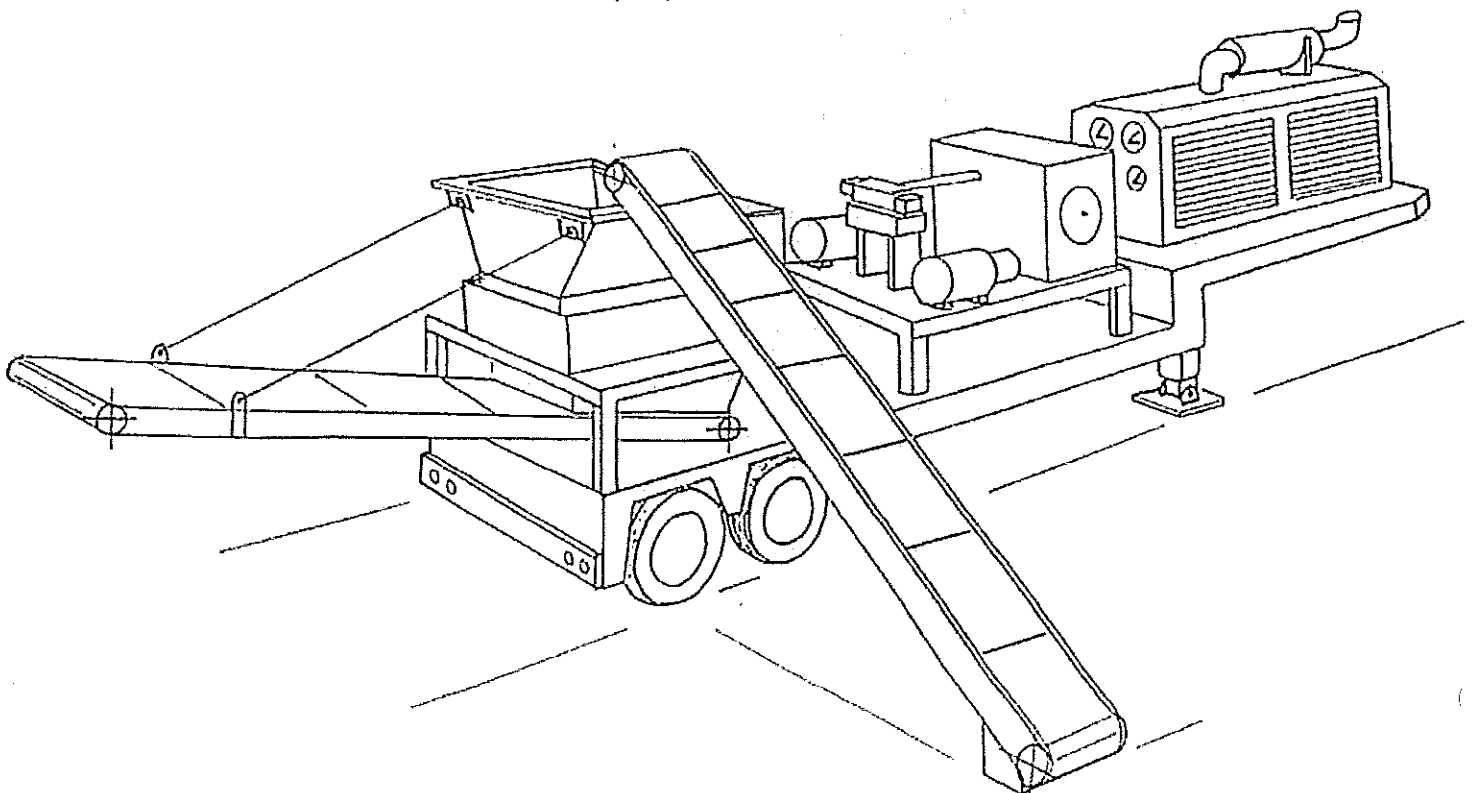
This state-of-the-art system can be the answer to your needs if legislation has closed your landfill to the burial of whole tires. Several states have set their policies, others are sure to follow. Take the time to look at the new Saturn Mobile System.

SATURN SHREDDERS, Division of MAC CORPORATION

201 East Shady Grove Road

Grand Prairie, Texas 75050

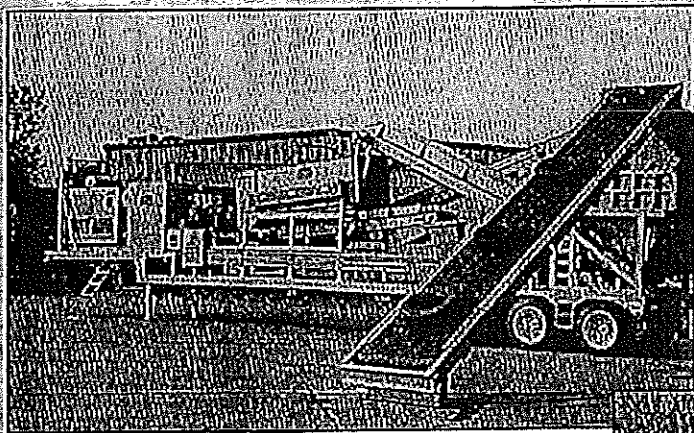
(972) 790-7800



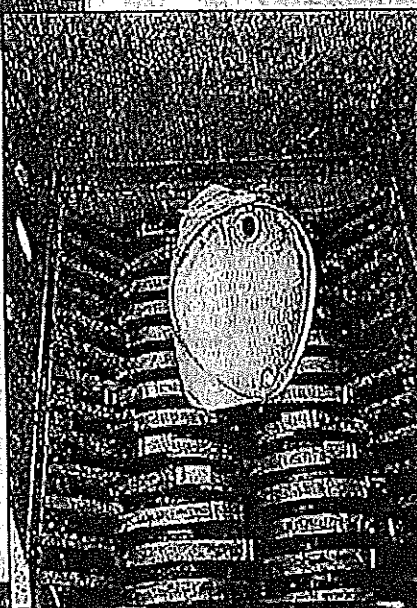
091390

SATURN SOLUTIONS We've got it

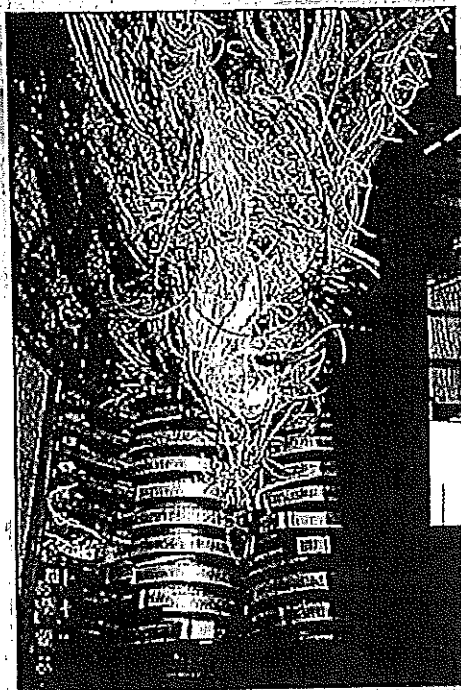
Someone else may have coined the phrase "nobody does it better." Introduction more than three decades ago, Saturn Shredders have application possible. Their durability and versatility, coupled with applications ranging from shredding of paper to processing nuclear processing design and installation can also benefit from Granutech from concept through installation and beyond!



MOBILE TIRE SHREDDING



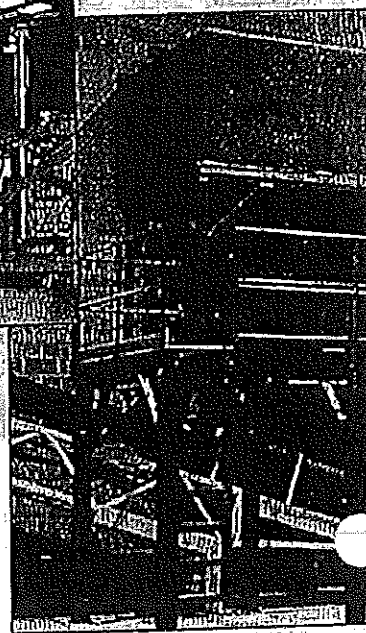
DRUM SHREDDING



CABLE & WIRE PROCESSING



LOW RAD WASTE PROCESSING



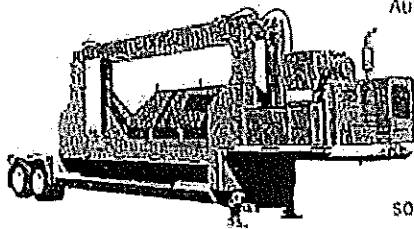
GRANUTECH-SATURN SYSTEMS THE WHOLE STORY

Granutech-Saturn Systems Corporation, offering equipment and peripherals under the Granutech, Saturn Shredders and MAC names, is one of the world's largest manufacturers of equipment and systems for size reduction and material recycling. Since 1965, the Grand Prairie, Texas-based company has demonstrated an unwavering commitment to quality equipment and world-class service for the various industries it serves, both in the U.S. and abroad. Shown here are Granutech-Saturn Systems' primary product lines.

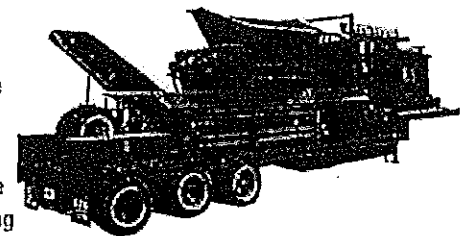
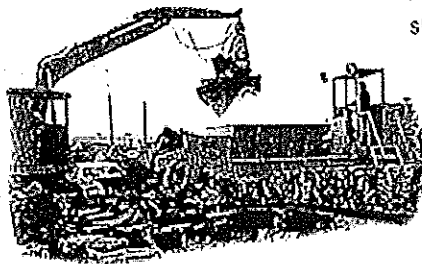
MAC
HATTERERS & BAILERS

GRANUTECH
SATURN
SYSTEMS

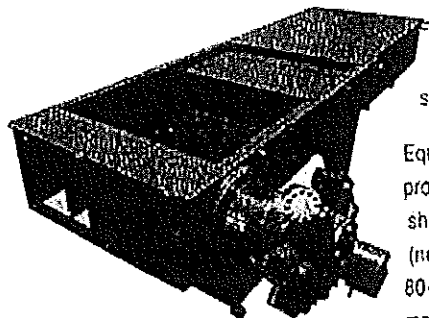
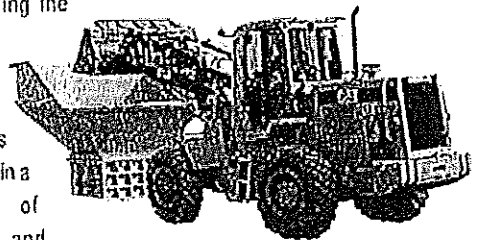
SATURN
SHREDDERS



Automobile recyclers and other ferrous/non-ferrous recycling operations have long relied upon MAC Hatterers and bailers for solid performance and minimal downtime. A full range of product offerings is available from the industry standard "Big MAC" Hatterer, to modified Hatterer designs for specialized processing demands.

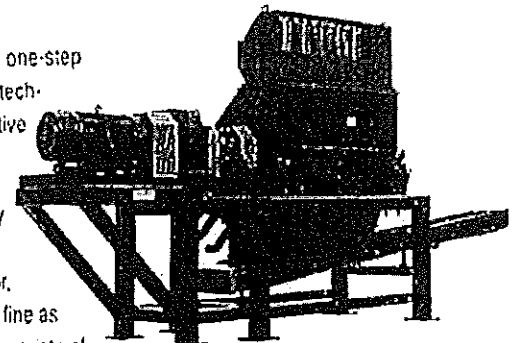


As shown in the previous pages, Saturn Shredders have been providing quality solutions to shredding problems for more than two decades. Today shredders bearing the Saturn name offer the broadest range of choices possible for use in a wide range of applications and industries.



When size reduction needs call for secondary processing, one-step reduction and sizing or granulation and powderization, Granutech-Saturn Systems Corporation leads the way with solid, effective solutions.

Equipment offered by Granutech-Saturn Systems includes: the Grizzly processor (shown at right); Roto-Grind single rotor shred/sizing units (shown at left); and the Granutech G-3 granulator (not shown) which, with available options, can produce material as fine as 80-mesh. All Granutech-Saturn Systems equipment is offered in a variety of models and sizes to suit your processing needs.

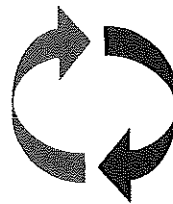


The bottom line? We do size reduction and we do it very, very well. If one-stop shopping is too trite a concept, then think of it as the most comprehensive source available for solutions to your recycling needs. No matter how you choose to look at it, we can provide the equipment — and the answers — you need.

ATTACHMENT C

REVISED OPERATION PLAN

Prepared for



Omni Waste
of Osceola County, LLC

1501 Omni Way
St. Cloud, FL 34773

OPERATION PLAN

J.E.D. SOLID WASTE MANAGEMENT FACILITY

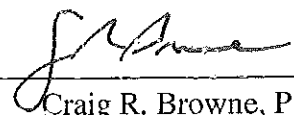
Prepared by

Geosyntec 
consultants

engineers | scientists | innovators

14055 Riveredge Drive, Suite 300
Tampa, FL 33637

Project Number FL1295-01
Revised December 2009



Craig R. Browne, P.E.
Florida Registration No. 68613

Date: 12/18/2009

TABLE OF CONTENTS

1.	INTRODUCTION	1
1.1	Terms of Reference	1
1.2	Purpose and Scope of the Operation Plan	1
1.3	Operation Plan Organization	1
2.	LANDFILL PERSONNEL AND FACILITIES	3
2.1	Personnel Requirements	3
2.1.1	Numbers and Types	3
2.1.2	Employee Training	3
2.2	Landfill Entrance Procedures	4
2.2.1	Hours and Days of Operation	4
2.2.2	Processing Customers	5
2.2.3	Public Use	6
2.2.4	Vehicle Inspection Plan	6
2.3	Traffic Routing	6
2.3.1	Access Points/Signs	6
2.3.2	On-Site Traffic Flow	6
2.4	On-Site Structures	7
2.5	Communication Facilities	7
3.	LANDFILL OPERATIONS	8
3.1	Basic Landfilling Procedures	8
3.1.1	Method of Operations	8
3.1.2	Working Face Practices	9
3.1.2.1	Start-Up and First Lift	9
3.1.2.2	Subsequent Lifts	9
3.1.3	Filling Procedures	10
3.1.3.1	Width of Working Face	10
3.1.3.2	Unloading	11
3.1.3.3	Pushing, Spreading and Compacting	11
3.1.3.4	Daily Clean-Up	11
3.1.4	Cover	12
3.1.4.1	Stockpiling	12
3.1.4.2	Application and Phasing of Cover Materials	12
3.2	Equipment	12
3.2.1	Primary Equipment	12

3.2.2	Back-Up Equipment.....	13
3.2.3	Support Equipment	13
3.2.4	Equipment Care.....	13
3.3	Roads.....	14
3.3.1	Road Construction.....	14
3.3.2	Maintenance of Roads.....	14
3.3.2.1	Filling of Potholes.....	14
3.3.2.2	Grading.....	14
3.3.2.3	Restoring Settlement.....	14
3.3.2.4	Cleaning of Public Access Roads	15
3.3.2.5	Removal of Materials from Landfill Roadways	15
3.3.2.6	Maintenance Drainage Swales	15
3.4	Drainage Features.....	15
3.5	Salvaging/Recycling	16
4.	ENVIRONMENTAL CONTROLS.....	17
4.1	Environmental Control Systems	17
4.1.1	Leachate Containment and Control.....	17
4.1.2	Surface-Water Controls.....	17
4.2	Facility Inspection Plan.....	18
4.2.1	Leachate Collection System (LCS).....	18
4.2.2	Leachate Storage Facility.....	18
4.2.3	Surface-Water Control System	18
4.2.4	Landfill Cover System	19
4.2.5	Facility Inspection Schedule.....	19
4.3	Facility Maintenance Plan.....	20
4.3.1	Leachate Collection System.....	20
4.3.2	Surface-Water Control System	20
4.3.3	Final Cover Maintenance	20
4.4	Water Quality Monitoring Plan.....	21
4.5	Landfill Gas Monitoring Plan	21
4.5.1	Monitoring of On-Site Buildings	21
4.5.2	Monitoring for Landfill Gas Along Property Boundary.....	22
4.5.3	Monitoring for Objectionable Odors at the Property Boundary.....	22
4.5.4	Detecting Exceedances of the Regulations.....	22
4.6	Landfill Active Area Controls	23
4.6.1	Litter Control.....	23
4.6.1.1	Prevention of Litter on the Working Face	23
4.6.1.2	Control of Litter with Litter Fences	23
4.6.2	Buffer Maintenance.....	23

4.6.3	Dust Control.....	24
4.6.4	Vector Control.....	24
4.6.5	Noise Control	24
4.6.6	Recordkeeping.....	25
5.	EMERGENCY CONTINGENCY PLAN	27
5.1	Introduction.....	27
5.2	Fire Control Plan.....	27
5.2.1	When Fire Occurs	27
5.2.2	"Hot Load" Procedures	28
5.2.3	Fire Extinguishers and First Aid Kits	29
5.3	Accident or Injury	29
5.3.1	When an Injury Occurs	29
5.3.2	Procedures After an Accident	30
5.4	Release of Contamination to Environment (Remedial Response).....	31
5.4.1	Response	31
5.4.2	Follow-Up	31
5.5	Hazardous or Other Unauthorized Materials	32
5.5.1	The Observer.....	32
5.5.2	Landfill Site Manager	33
5.5.3	Non-Discharged Load	33
5.6	Uncooperative Customers	33
5.7	Inclement Weather	34
5.7.1	Operation in Wet Weather	34
5.7.2	Preparation for Inclement Weather	35
5.7.3	Preparation for Severe Weather or Hurricanes.....	35
5.8	Problems Affecting the Leachate Collection and Removal Systems.....	37
5.8.1	Interruption of Power Service to the Landfill	37
5.8.2	Interruption of Flow to Leachate Storage Facility	37
5.8.3	Primary Leachate Sump Alarm Level Switch.....	37
5.8.4	Managing Hazardous Leachate	38
6.	SAFETY PLAN	39
6.1	Emergency Procedures.....	39
6.2	General Safety Practices	39
6.3	Safety Equipment.....	40
6.4	Site User Rules.....	40
7.	FINAL CLOSURE.....	42
7.1	Introduction.....	42

7.2	Final Cover System Components.....	42
7.3	Seeding and Planting.....	43
7.4	Erosion Minimization	43
7.5	Drainage	43
8.	BORROW AREA OPERATIONS	44
8.1	Overview	44
8.2	Wet Excavation.....	44
8.3	Dry Excavation.....	45

LIST OF TABLES

Table 1	Personnel Requirements	45
Table 2	Heavy Equipment Requirements.....	46
Table 3	Heavy Equipment Rental Companies	47
Table 4	Operator Protective Equipment	48

APPENDICES

APPENDIX A:	TRAINING PLAN
APPENDIX B:	WASTE INSPECTION PLAN
APPENDIX C:	EMERGENCY RESPONSE AGENCIES
APPENDIX D:	OPERATION AND MAINTENANCE PLAN FOR LEACHATE RECIRCULATION
APPENDIX E:	WASTE SOLIDIFICATION OPERATION PLAN
APPENDIX F:	AUTO SHREDDER RESIDUAL RECYCLING PLAN
APPENDIX G:	WASTE TIRE STORAGE AND PROCESSING PLAN

1. INTRODUCTION

1.1 Terms of Reference

This Operation Plan has been prepared by Geosyntec Consultants (Geosyntec) on behalf of Omni Waste of Osceola County, LLC (Omni) for a Class I landfill known as the J.E.D. Solid Waste Management (JED) facility. The Operation Plan for the JED facility has been prepared to comply with the requirements of Chapter 62-701 of the Florida Administrative Code (FAC).

1.2 Purpose and Scope of the Operation Plan

The Operation Plan provides a detailed description of the daily operations at the JED facility, including contingency operations as required by Sections 62-701.320(7)(e)(1,2), and 62-701.500 of the FAC. The primary purpose of the Operation Plan is to describe the framework to operate and manage the JED facility so that the landfill is operated and maintained in a condition that protects the public health and the environment. This Operation Plan also provides a description of borrow area operations for obtaining fill material during both the construction and operation phases of the landfill.

1.3 Operation Plan Organization

The organization of the Operation Plan is described below:

- Section 2 describes personnel requirements, landfill entrance procedures, traffic routing, and facilities for the Class I landfill;
- Section 3 discusses landfill operations including basic landfilling procedures, waste handling, waste relocation, equipment, on-site roads, and general maintenance procedures for drainage swales;
- Section 4 discusses environmental controls including leachate containment and control, surface-water control, facility inspection, maintenance, monitoring, landfill active area controls, and record keeping;
- Section 5 describes the contingency plan for emergencies at the site;
- Section 6 describes the safety plan for the site;

- Section 7 discusses final closure of the JED facility;
- Section 8 describes operation of the borrow area.

2. LANDFILL PERSONNEL AND FACILITIES

2.1 Personnel Requirements

2.1.1 Numbers and Types

The positions and number of personnel anticipated to be employed for each position are presented in Table 1. Omni will have at least one trained operator at the landfill during active operations and at least one trained spotter at each working face. The operator and the spotter may be the same person. The staffing levels presented in Table 1 provide for absences due to vacation, illness, holidays, or other reasons. Peak solid waste receipt periods, or other emergency conditions may require additional personnel and/or staff working overtime. These staffing levels are based on the assumption that work activities will generally take place 10 hours per day, 5 days per week and a half day on Saturday.

If the daily volume at the landfill increases enough to require additional equipment, the staff will be increased as required to supply the personnel to operate and maintain the additional equipment. The minimum crew required to operate the landfill for receipt of waste is also presented in Table 1. In addition to the permanent staff, casual labor may be hired for area clean-up, ground maintenance, and other intermittent activities as required.

2.1.2 Employee Training

Employees of the landfill will receive initial and continued training in accordance with requirements of Section 62-701.320(15) of the FAC, and other Omni on-the-job training in the safe and environmentally secure operation of the landfill. In accordance with Section 62-701.320(15)(b)1 of the FAC, the operators at the landfill will complete 24 hours of initial training and pass the examination as part of the initial training. Within three years of the initial training, and every three years thereafter, landfill operators will complete additional 16 hours of continued training. In accordance with Section 62-701.320(15)(c) of the FAC, the spotters at the landfill will complete 8 hours of initial training as described in this Operation Plan. Within three years of the initial training, and every three years thereafter, landfill spotters will complete additional 4 hours of continued training. All certified training (initial and continuing education) will be provided by a FDEP-approved, qualified, independent third party in accordance with Section 403.716, F.S.

Omni will maintain training records for current employees at the facility and will make all records available to FDEP upon request. The requirements of the training program will also be documented in writing. Examples of subjects to be covered in the employee training program include the following:

- overview of this Operation Plan;
- review of permits and regulations for operators and other key personnel;
- general landfill safety procedures pertaining to work around solid waste, landfill gases, and leachate;
- instruction in the operation and maintenance of equipment, machinery, and systems which the employee must operate, service, or monitor during his/her daily job duties;
- instruction in emergency response procedures for landfill fires or explosions, leachate pumping system failure or leaks, or other emergency situations;
- instruction in emergency shutdown procedures; and
- appropriate procedures for spotters and equipment operators, scale masters and other key personnel including recognition of hazardous wastes and reporting procedures for discovery of unauthorized wastes.

A list of trained spotters and operators at the JED facility and a list and schedule of the classes offered to the public, which may be attended by the JED facility's operators and spotters, is presented in Appendix A.

2.2 Landfill Entrance Procedures

2.2.1 Hours and Days of Operation

The landfill may be open to accept and dispose of solid waste from dawn to dusk, or 10 hours per day, whichever is greater. Typical landfill hours for acceptance of waste are:

Monday through Friday: 6:00 am to 5:00 pm

Saturday: 6:00 am to 2:00 pm

Construction, daily cell preparation, hauling/excavating, road building, leachate management, or all non-disposal waste acceptance can be performed both within and outside of the posted operating hours. The actual hours of operation will be posted at the main entrance to the landfill. The landfill may be closed on Sundays and the following holidays:

Thanksgiving

Christmas

New Year's Day

2.2.2 Processing Customers

Upon entering the site, all landfill users entering the disposal area will be required to stop at the weigh station. The scale master will record the weight and type of waste for each waste load brought to the landfill. All waste loads will be visually inspected for hazardous or other unauthorized wastes in accordance with the waste inspection plan, which is presented in Appendix B. A load-checking program will be used at the landfill to detect and discourage attempts to dispose of unauthorized wastes at the landfill. The load checking program consists of the following:

- The Landfill Site Manager is to examine at least three random loads each week. The selected waste hauling vehicles are to be directed to discharge their loads at a designated location within the landfill for a detailed inspection of the discharged material for any hazardous waste.
- If any regulated hazardous wastes are identified by the random load inspection or otherwise discovered to be improperly deposited at the landfill, the Landfill Site Manager will promptly notify FDEP, and if known the person responsible for shipping the wastes to the landfill, and the generator of the wastes. The area where the hazardous wastes are found will be immediately cordoned off from public access and properly removed from the designated location/work face. If the generator or hauler cannot be identified, the landfill operator will assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.
- A record of information and observations gathered during each random waste load inspection will be maintained. This documentation will include: the date and time of inspection; load weight; names of the hauling firm and driver of the vehicle; vehicle license plate number; source of waste as indicated by the driver; and observations made by the inspector during the detailed inspection. The responsible inspector will sign each waste inspection record. The random waste load inspection documentation will be maintained at the landfill for a period of at least three years.

Vehicles will be directed to the appropriate disposal area by signs or other means. Verbal instructions will be given by facility personnel when necessary. The appropriate area depends on whether the waste is typical municipal solid waste, yard waste, white goods, used tires, or waste that should be placed in a particular location for special handling.

2.2.3 Public Use

Small, private vehicles will be directed to place their load in the appropriate disposal area by the scale master. Private vehicles will typically be directed to unload in two 20-yard roll-off containers located in the administrative area. However, private vehicles with a dump trailer will be directed to the landfill. These vehicles will be directed to unload in an area away from the commercial waste trucks and will be assisted to unload and return as quickly as practical.

2.2.4 Vehicle Inspection

A plan will be implemented by the Landfill Site Manager to prevent the on-site disposal of unauthorized wastes. A copy of the Waste Inspection Plan prepared for the Class I landfill is presented in Appendix B. This plan will be implemented by the Landfill Site Manager or designee to prevent the on-site disposal of unauthorized wastes.

The Landfill Site Manager or designee (Inspector) will be in charge of inspecting waste vehicles arriving at the site. The Inspectors will receive training in unauthorized waste identification. The training provides the opportunity to improve the inspector's knowledge and ability to effectively screen incoming waste.

2.3 Traffic Routing

2.3.1 Access Points/Signs

Access by all vehicles shall be via a single secured site entrance located on highway US 441. The entrance will allow for safe and orderly traffic flow into and out of the facility. The site entrance gate will be locked outside of operation hours.

Signs will be posted at the site entrance indicating the name of the facility, name of the operating authority, and hours and days of operation. In addition, a sign which clearly states "NO HAZARDOUS WASTES ACCEPTED" will be located at the entrance to the landfill. Traffic control and safety requirement signs will be located at and near the entrance to the facility as required.

2.3.2 On-Site Traffic Flow

Once vehicles delivering wastes have been weighed, they will follow directions or signs posted along the haul road(s) to the current active work areas of the landfill, or designated offloading area for waste solidification, waste tire storage, and auto shredder residual recycling. Trucks will then proceed to deposit their loads at the appropriate working face.

Signs or the scale master will direct small public vehicles to deposit their loads in the appropriate disposal area.

2.4 On-Site Structures

The site includes the following structures:

- office building/ticket office/weigh station;
- scales;
- maintenance shop; and
- storage area.

2.5 Communication Facilities

The following communication facilities will be provided for routine communication and for use in emergencies at the site:

- cellular and/or conventional telephone in the office building; and
- on-site two-way radios.

3. LANDFILL OPERATIONS

3.1 Basic Landfilling Procedures

This section describes the procedures that constitute the daily landfill operations, the sequence of landfilling, working face practices, and control of the first and subsequent lifts. The landfill will be operated in accordance with these procedures and filled in the general sequence as indicated on the Permit Drawings.

3.1.1 Method of Operations

Landfilling areas will generally progress from north to south and from west to east. When a cell is opened, waste lifts will be placed to cover all areas to a depth of 10 feet to reduce leachate generation prior to placement to higher elevations in a cell.

Controlling truck routes and properly spotting loads will facilitate the spreading, compaction, and covering of refuse. During construction of the first lift, trucks will be positioned on a lift of previously compacted waste adjacent to the first lift being placed. In subsequent lifts, unloading at the toe of the working face and pushing uphill may be the preferred method. Lateral confinement or small work faces will be maintained to avoid wasting soil cover material. Temporary barricades or flags may be used as daily width markers for guiding equipment operators and for traffic control.

Vehicles transporting refuse and cover material to the working face will be routed over previously filled areas, whenever possible, for additional compaction of refuse and soil. Vehicles will not be routed over areas of the final cover system unless on a road specifically designed for hauling waste. Disposal vehicles will not be routed over a lined area before a lift of waste has been placed, in order to prevent damage to the liner.

Signs will also be posted in the operational areas if and when required. These signs will direct traffic, identify buildings, and specify types of material to be deposited in particular areas, including the waste solidification, waste tire storage, and auto shredder residual recycling areas. Safety signs will also be posted to identify certain safety requirements such as no smoking, speed limits, and stop signs.

The refuse may consist of household and commercial wastes, construction, demolition debris, and other similar materials, as allowed by regulations for Class I landfills. These readily compactable wastes lend themselves to the typical operations described in Sections 3.1.2 and 3.1.3.

3.1.2 Working Face Practices

3.1.2.1 Start-Up and First Lift

To assure protection of the landfill liner system, no disposal vehicles will be operated directly on the liner protective cover. Soil platforms or similar protective measures will be placed adjacent to the working face to keep vehicles off the liner protective cover. Landfill personnel will be positioned at the working face for the start-up of each new area to direct vehicles to their unloading points.

The first lift of waste on the liner protective cover will be placed with great care, using special methods to protect the liner from damage. The first lift of waste will be a minimum of 4 feet in compacted thickness and consist of select wastes containing no large rigid objects that may damage the liner or leachate collection system. Equipment will not be allowed on the liner protective cover and equipment will not spread waste in a manner that displaces the liner protective cover soil. Landfill personnel will closely monitor the placement, compaction, and covering of the first layer of waste. Landfill personnel will maintain grade control and inspect the filling techniques. Inadvertent damage or suspected damage to the liner system will be reported to the Landfill Site Manager and restored prior to filling in the damaged area.

To protect the liner system, the bulldozer will normally be used as the primary spreading and compacting machine for the first lift. The compactor will only be operated on top of the waste and not on the landfill base or on the waste sideslopes. The equipment operators will also make sure that no bulky waste or other material, which could damage the liner system is placed within the first lift.

3.1.2.2 Subsequent Lifts

After the first lift is properly in place, normal operating procedures will be used for the second lift and all subsequent lifts. Trucks and compactors are permitted to operate on these lifts. Bulky wastes delivered to the facility and any stockpiled bulky wastes received during construction of the first lift will be placed in subsequent lifts. The daily operating procedures including routing of traffic, placement, spreading and compaction of refuse, and application of initial and/or intermediate cover will be followed for the subsequent lifts of waste. Soil erosion control and site maintenance tasks will be implemented throughout the development of all lifts. Once the final landfill elevations have been reached over a suitably sized area, final cover will be applied to the landfill during the next construction season and vegetated during the customary planting season.

At the end of each working day, initial cover material (e.g., soil or alternate material) will be applied. A loader and truck or a scraper can be used to load and haul soil from the stockpile area to the working face where it will be temporarily stockpiled or spread directly over the waste. Intermediate cover will be applied on areas that will be exposed for more than 180 days (i.e., outside sideslopes and the top of the final lift or portions of other lifts not soon to be covered by additional refuse.) An alternative to the soil, which is used as initial cover may consist of foundry sand, foam, a fabric blanket, or other approved material.

Material from on-site stockpile or borrow areas will be used to supply initial and intermediate cover requirements. To conserve soils and landfill space, the initial and intermediate cover will be scraped back immediately before placement of additional solid waste on top of the lift, and then reused as cover material if appropriate, or will be incorporated into the working face. Initial and intermediate cover will be graded to drain away from the active work area.

3.1.3 Filling Procedures

After the first lift, waste materials will be placed in 2-ft thick horizontal layers when possible and compacted to approximately 1-ft thickness or as thin a layer as practical before the next lift is applied.

The refuse cell is the basic building block of a landfill. It is composed of multiple compacted layers of waste and enclosed by cover material (i.e., initial, intermediate and/or final cover). Basic instructions for constructing the refuse cell are outlined below.

3.1.3.1 Width of Working Face

The working face is the portion of the uncompleted cell on which additional waste is spread and compacted. To maintain sanitary operation, the working face will be kept as narrow as possible. By keeping the working face narrow, equipment movement, cover material requirements, and the area of exposed waste is minimized. In order to facilitate proper unloading and waste placement operations, two working faces may be required from time to time.

The optimal daily working face width will vary depending on the number of vehicles bringing waste to the site. The working face will be wide enough to prevent a large backlog of trucks. It is expected that a working face 150 to 200 ft (46 to 61 m) in width will be sufficient for operation of the JED facility.

3.1.3.2 Unloading

When unloading waste from top of the refuse cell, the waste will be discharged as close to the edge of the active working face as safe operations permit and pushed down slope. For safety reasons, a minimum 8 to 10 ft separation will be maintained between the refuse trucks and the landfill equipment.

When unloading waste from the bottom of the refuse cell, the waste will be discharged approximately 10 ft from the toe of the working face and pushed up the slope. Truck and landfill equipment separation, as discussed above, will be maintained. In order to prevent loads of waste from being discharged too far away from the toe, refuse trucks can be backed toward the toe, following a path created by the equipment pushing refuse into the working face.

3.1.3.3 Pushing, Spreading, and Compacting

Proper refuse cell construction involves pushing, spreading, and compacting the waste. These functions will be accomplished with a bulldozer and/or a compactor.

Pushing the waste is the action of moving the waste from the discharge location into the working face. This function will be accomplished with a bulldozer and/or compactor.

Spreading of the waste can be done by either a bulldozer or compactor. The purpose of the spreading action is to distribute the waste over the working face in a thin layer (approximately 2 ft thick). High in-place compacted unit weight of the waste is achieved by compacting in thin layers (i.e., 2 ft thick).

Good compaction is achieved by operating the landfill compactor up and down the working face after the refuse has been spread into a thin layer. Proper compaction of the waste will extend landfill life, while reducing litter and vector problems. To maximize compaction of the waste, the working face and inside temporary slopes will not exceed a maximum slope of 3H:1V. The Landfill Site Manager will periodically verify the compaction procedures and make corrections as necessary.

3.1.3.4 Daily Clean-Up

The area receiving wastes will be policed daily for loose waste and litter. Such waste, as well as litter along the litter fences, will be removed. The litter may be stored in trash bags until it can be deposited in the landfill.

3.1.4 Cover

3.1.4.1 Stockpiling

Cover soil stockpile locations, if needed, will change throughout the life of the landfill depending on site conditions and the location of the active working face. Landfill equipment will begin pushing or spreading the cover over the active cell area when and where it has reached its limit for the day.

A minimum of a three-week supply of acceptable initial cover will be maintained at the landfill and be available at all times. All stockpiles will be graded to minimize erosion potential. Silt fences or diversion berms will be utilized to control erosion.

3.1.4.2 Application and Phasing of Cover Materials

A 6 in. (150 mm) thick initial earth cover will be placed on top of all exposed waste on the working face at the end of each day's operation. If additional waste is to be deposited on the working face within 18 hours, the initial cover may consist of a temporary cover, such as a tarpaulin, that may be removed prior to the placement of additional waste. Alternative materials that may be used as initial cover at the JED facility include tarps, tire chips, auto shredded fluff, mulch mixed with soil, and petroleum contaminated soils. A 12-in. (300-mm) thick intermediate earth cover will be placed over the initial cover within 7 days of completion of an area if no additional solid waste will be deposited within 180 days.

Final cover will be placed over the areas of the landfill that have reached final design elevations. Final cover will be placed within 180 days of reaching the final design elevations. The final cover system will be as described in Section 7 of this Operation Plan. Vegetation will be maintained over the final cover areas throughout the life of the landfill and the post closure care period. Maintenance of the final cover swales, and access roads will also be performed throughout the life of the landfill and the post closure care period.

3.2 Equipment

3.2.1 Primary Equipment

Based on the available range of handling capacities and the initial projected waste receipts, the allocation of heavy, primary equipment presented in Table 2 will be sufficient to handle the wastes received at the landfill. The primary functions of heavy landfill equipment are spreading and compacting solid waste, and excavating, hauling, and spreading cover material. Equipment similarities allow different equipment to perform functions as necessary.

For example, when a compactor breaks down, a bulldozer can perform the compaction operation.

3.2.2 Back-Up Equipment

The equipment selection guide indicated in Table 2 will be adequate even if one of the pieces of equipment is temporarily out of service. If a piece of equipment is out of service for an extended period or if additional equipment is required on a temporary basis, this equipment is available for rental from several heavy equipment rental companies listed in Table 3.

3.2.3 Support Equipment

In addition to the heavy equipment used for operating and maintaining the landfill, other support equipment may be used to perform work not essential to the operations. This equipment will be present at the site most of the time, but some may be off-site, temporarily out of service, or rented for a specific occasion.

One 3,000 gallon or larger portable water storage tank will remain on site at all times and will be used for dust control and fire protection. The storage tank will be truck-mounted on either a tilt frame or roll-off container hoist, depending on vehicle availability. The storage tank will normally be positioned close to the working face for fire protection. However, it will also be equipped with spray bars so it can be used for dust control.

A utility tractor will be used to perform site maintenance activities. It will be fitted with attachments for mowing grassed areas. A backhoe or small excavator will assist the small dozer in maintaining drainage courses and ditches and for other site maintenance activities.

Pumps will be used for filling the portable water storage tank. These pumps will also be used to dewater any ponded water that forms in low areas around the site, including roads and lined landfill areas not in use.

3.2.4 Equipment Care

Routine preventive maintenance will minimize equipment downtime and increase equipment service life.

Preventive maintenance varies with each piece of equipment. Therefore, the operation and maintenance (owner's) manual for each should be consulted. However, three applicable maintenance activities, which will be implemented at the site are:

- establish a routine equipment inspection program;

- lubricate according to manufacturer's recommendations; and
- keep maintenance records.

3.3 Roads

3.3.1 Road Construction

The main access road from the site entrance area to the scale house will initially be an improved, all weather, rock/recycled concrete surfaced road. The main access road will be paved within the next construction season after the site reaches and maintains 1,000 tons/day average for 30 consecutive working days. Haul roads will be constructed from the scale house to the active work area in the landfill. The haul roads will be improved, all weather, rock/recycled concrete surfaced. A perimeter maintenance road will provide all weather access to leachate management systems, groundwater monitoring wells, landfill gas monitoring wells, and storm water management structures. The perimeter maintenance road will be surfaced with limerock or recycled crushed concrete. In the active work area, the roads will be surfaced with construction/demolition waste or other acceptable waste.

3.3.2 Maintenance of Roads

3.3.2.1 Filling of Potholes

Potholes will be filled with materials compatible with the road construction material. Potholes will be filled on a routine basis so that they are not allowed to remain open for extended periods. Before placing patches in holes, all loose material will be removed from the hole. New material will then be placed in the hole and compacted so that it will be approximately as dense as the materials originally used in the road.

3.3.2.2 Grading

As unpaved, all-weather roads become uneven due to traffic-caused rutting or displacement of stone, fresh rock or recycled crushed concrete will be applied to the surface and smoothed to an evenly sloped grade to promote drainage.

3.3.2.3 Restoring Settlement

When all-weather roads are built on fill areas, settlement of the filled area may cause cracks to appear in a road or cause the slope of a road to change. Cracks will be filled with material that is compatible with the roadbed. Areas of a sloped road, where the slope has

changed drastically, will be built up with material compatible with the roadway. The buildup will be made by placing a 6 in. thick layer of the material, compacting it, then placing another 6 in. thick layer of material and compacting again. This process will be repeated until the desired elevation is achieved or the road section will be rebuilt.

3.3.2.4 Cleaning of Public Access Roads

Proper operation of the landfill will result in little or no debris being found on public roads. The public roads adjacent to the site entrance area will be inspected daily. If debris from the wheels of vehicles departing the landfill reaches the public access road at the entrance to the landfill, that road will be cleaned to a distance of 0.25 mi (0.4 km) or as required in both directions, if necessary, from the entry point onto the road.

3.3.2.5 Removal of Materials from Landfill Roadways

Any significant accumulation of dirt, brush, and other debris will be removed from the landfill roadways. Dirt left on asphalt roadbeds may cause dust problems during dry weather or mud problems during wet weather. A program of road cleaning will be implemented to prevent any buildup. Unpaved roads will be watered as needed to minimize dust.

3.3.2.6 Maintenance of Drainage Swales

Drainage swales along road beds will be kept free of obstructions. During the wet weather seasons, inspection of all drainage ditches and structures will be made at least once each week, or more frequently as required, and debris removed as required.

3.4 **Drainage Features**

- **Routine Inspections:** Inspection procedures are outlined in Section 4.2.3.
- **Channels, Pipes, and Inlet Structures:** Drainage structures will be cleaned of debris as soon as practical after problems are identified to prevent ponding. When unlined channels silt up, routine cleaning will be performed to restore the original capacity of the channels.
- **Repair of Structures:** Damaged structures will be permanently repaired during dry weather periods. During rainy periods, temporary repairs may be made to prevent further damage to the structure or erosion of soil.
- **Sediment Barriers:** Sediment barriers will be visually inspected periodically for damage, and to determine if sediment has accumulated behind them. Sediment

will not be allowed to accumulate to a height exceeding half that of the barrier. Barriers will be replaced when visibly damaged. Barrier footings will also be inspected to ensure that drainage is not flowing beneath the barrier unless designed to do so.

3.5 Salvaging/Recycling

No scavenging will be permitted at the landfill. Recycling of auto shredder residual will be performed in the active lined disposal footprint as described in the Auto Shredder Residual Recycling Plan provided in Appendix F. Waste tires will be accepted, stored and processed at the waste tires storage and processing area. The processed tires will be directly disposed in the landfill or used as initial/daily cover. Other recycling uses of processed tires may be proposed as markets are developed. Waste tire and processing operations are described in the Waste Tire Storage and Processing Plan provided in Appendix G. If the volume of other recyclable goods is sufficient, as determined by the Landfill Site Manager, those items may be separated from the waste which is to be disposed.

4. ENVIRONMENTAL CONTROLS

This section presents the basic components of the environmental controls at the JED Class I landfill. The major components of this section are the Facility Inspection Plan, Facility Maintenance Plan, and the Facility Monitoring Plan. In this section, a discussion of each of these components is presented, including a discussion of groundwater and surface-water protection controls, leachate collection system (LCS), and surface water controls, where appropriate. The discussion also includes general facility controls, including initial, intermediate and final cover, and access roads.

4.1 Environmental Control Systems

The purpose and function of each of the major environmental control systems are described below. Specific construction and design details are presented in the construction documents, the closure plan, post-closure plan, and the design report with attached plans.

4.1.1 Leachate Containment and Control

The Class I landfill is equipped with a double-composite liner system, which directs any liquid entering the landfill that may have contacted refuse to an LCS. The LCS drains liquid collected on the primary liner into a sump. Leachate in the sump is pumped into an on-site storage facility and trucked to a wastewater treatment plant (WWTP) for disposal or recirculated back into the lined landfill area in accordance with the procedures described in the Operation and Maintenance Plan for Leachate Recirculation provided in Appendix D. Quantities of leachate collected by the LCS will be recorded in gallons per day and maintained as part of the landfill operating record.

A recording rain gauge will be installed, operated, and maintained to record precipitation at the landfill. Precipitation records will be maintained as part of the landfill operating record and used to compare with leachate generation rates.

4.1.2 Surface Water Controls

The surface-water management system for the JED facility consists of a system of drainage swales to move storm water to either permanent dry retention basins or interim dry retention basin, depending on the stage of landfill construction. All dry retention basins are surrounded by an earth berm designed to contain all runoff from a 100-year storm event. Where runoff must pass through a roadway, appropriately sized culverts will be installed.

4.2 Facility Inspection Plan

4.2.1 Leachate Collection System (LCS)

The LCS will be water pressure cleaned or inspected using a video camera after construction but prior to placement of any waste. The pump(s) will be tested in the sump to assure that the system operates properly. Deficiencies will be repaired prior to initial deposition of waste.

The LCS includes manholes, pumps, a leachate wet well and a force main. The LCS pumps will be removed and inspected every 2 years. This 2-year inspection will consist of pressure testing of the pump. Pumps located in active areas, or areas without final cover, will be inspected on a monthly basis to confirm normal operation. Additional inspection, preventative maintenance, and checking of the electrical components will be performed in a manner and frequency in accordance with manufacturer's recommendations. The leachate transmission manholes will be inspected weekly for accumulation of leachate in the manhole and to verify integrity of the force main.

4.2.2 Leachate Storage Facility

The exposed exterior of the polyethylene leachate storage containers or steel tanks will be inspected weekly for leaks, deterioration, and maintenance deficiencies. The overflow control equipment will also be inspected weekly to ensure it is in good working order.

If inspection reveals a storage container or equipment deficiency, leak, or any other deficiency that could result in failure of the storage system to contain the leachate, remedial measures will be taken immediately to eliminate the leak or correct the deficiency. Inspection reports will be maintained and made available to FDEP upon request for the lifetime of the leachate storage facility.

4.2.3 Surface Water Control System

Surface-water culverts may contain landfill gas. Prior to accessing piping, protective measures will be taken to avoid explosion(s), fire(s), and asphyxiation(s).

Drainage swales, inlets, structures, and the surface-water management areas will be visually inspected monthly or following storm events. The frequency of dry inspections may be modified as appropriate based on progressive experience with the landfill drainage system, however, in no case will inspections be less frequent than quarterly. Regardless of the inspection frequency, the system will be inspected following each twenty-five year storm event (i.e., 9 inches of rain in 24 hour period) or greater storm event.

Drainage swales, inlets, and structures will be cleared of obstructing debris as soon as practical after a problem is identified. If channels become filled with an accumulation of debris or soil, cleaning may be required to restore original flow capacity.

Erosion control measures will be employed to correct any erosion that exposes waste or causes malfunction of the storm water management system. The control measures to repair erosion will be implemented within three days of occurrence. If the erosion cannot be corrected within seven days of the occurrence, a proposed correction schedule will be provided to FDEP.

4.2.4 Landfill Cover System

Areas that have received intermediate or final cover will be visually inspected periodically for signs of erosion, cracks and depressions due to settlement, and leachate seeps. Areas where waste or geosynthetics have been exposed by erosion will be filled and regraded to minimize any subsequent erosion. Significant depressions (1 ft or more) will be filled with soil, compacted, and regraded to promote positive drainage. If leachate seeps appear in the uncapped area of the landfill, the seep area will be excavated and backfilled with highly permeable material to promote seepage through the landfill. The intermediate cover will be reworked to seal the area.

4.2.5 Facility Inspection Schedule

Weekly	Exterior of HDPE leachate storage containers and overfill control equipment
Monthly (Visual)	Leachate collection pumps Surface-water management system Cover in completed areas Leachate force main
Quarterly	Surface-water control system (or after a 25 year storm event)
Annually	Surface-water control system pipes and structures Topographic survey of landfill
Bi-Annually (every 2 years)	LCS pumps and pipelines Leachate collection and detection flow meters, valves, and risers

4.3 Facility Maintenance Plan

In conjunction with the inspection plan, a regular schedule of maintenance will be prepared and implemented. This section refers specifically to the maintenance of the environmental controls installed at the landfill. It does not include the regularly scheduled maintenance of landfill roads or equipment such as vehicles, scales, or buildings. Maintenance requirements in this section refer primarily to the mechanical equipment associated with environmental controls. In addition, each piece of equipment will be inspected and maintained in accordance with all manufacturers recommendations.

4.3.1 Leachate Collection System

The electrical controls, pumps, flow meters, valves, and couplings will be maintained on at least a bi-annual basis (i.e., every two years). In addition, parts that tend to wear out on a regular basis, including bearings on pumps, seals, and gaskets, will be replaced during regular maintenance. After replacing maintained parts, the equipment will be tested to assure proper performance.

4.3.2 Surface-Water Control System

The surface-water control system does not include mechanical systems that require regular maintenance, however, the system is to be inspected on a monthly basis or following storm events. The swales, drainage structures, inlets, and pipelines will be repaired and maintained as soon as practical following identification of any damage or deficiencies. This includes repair of lined and unlined ditches in the active landfilling areas, on intermediate and final cover and diversion ditches around the landfill.

4.3.3 Final Cover Maintenance

Maintenance of the final cover includes all the components of the cap, i.e., the geomembrane, drainage geocomposite, protective soil layer and vegetation. The periodic inspections will help in assessing the final cover condition to verify the integrity of the cap (e.g., check for cracking of protective cover layer due to differential settlement or erosion and exposure of cover geomembrane/geocomposite), and the condition of the vegetation.

Areas of ponding or substantial differential settlement (1ft or more) will be checked to determine the cause. If a significant problem with the cover, vegetation, perimeter berms, erosion, or drainage structures is identified, work orders will be issued to correct the problems. Repair work shall be initiated as quickly as possible.

The timing of the repairs will be dependent on the nature of the repair. Minor filling to eliminate ponding, and the reseeding and fertilizing disturbed or problem areas will be accomplished with little delay. Major repairs, such as extreme erosion, significant local instability of slopes, or substantial settlement, might require geotechnical evaluation and design prior to implementing final repairs. In some cases, the need for analysis and design of the severely damaged areas will delay repair activities.

If repairs are necessary to the cover system swales, inlets, or downdrains to correct the runoff containment system deficiencies, the repairs will be undertaken prior to start of the wet weather season.

Repair of damages to the cover system resulting from erosion and differential settlement may include locally removing geosynthetics and backfilling depressions beneath the geomembrane, repairing geosynthetics, backfilling soil layers, and revegetating disturbed areas. Additional drainage facilities may be provided to prevent future erosion.

4.4 Water Quality Monitoring Plan

The groundwater and surface water quality monitoring plan for the JED facility is presented in Appendix E of the 2006 Solid Waste Renewal Permit Application. The leachate monitoring plan for the JED facility is presented in Appendix N of the 2006 Solid Waste Renewal Permit Application.

4.5 Landfill Gas Monitoring Plan

The landfill gas monitoring plan proposed for the JED facility will allow early detection of the lateral migration of landfill gas and verification of the landfill gas management system performance in accordance with the requirements of Section 62-701.530(1) FAC. The following types of landfill gas monitoring will be performed at the site: (i) monitoring for landfill gas in on-site buildings; (ii) monitoring for landfill gas migration along the perimeter berm; and (iii) monitoring at the property boundary for objectionable odors. The following subsections provide a description of the gas monitoring that will be performed at the facility.

4.5.1 Monitoring of On-Site Buildings

The on-site buildings will be located in the entrance area of the landfill. All buildings located within 500 feet of the waste limits on the property will be routinely monitored for methane. Continuous monitoring devices used within on-site buildings will be located in

work areas, near any penetrations or cracks in building foundation, or at points where methane might enter the building.

If methane is detected at a concentration greater than 25 percent of the lower explosive limit (LEL) in any on-site building, Omni will perform the activities described in Section 4.5.4.

4.5.2 Monitoring for Landfill Gas Along Property Boundary

Gas monitoring probes along the property boundary (or the storm water berm where property boundary is far away from the waste limits) will be used to detect lateral migration of landfill gases. The gas monitoring probes located around the perimeter of the site will be monitored quarterly for methane. Should the results of the quarterly monitoring indicate lateral migration of landfill gases, Omni will install additional gas monitoring probes, as needed, in the area(s) of concern and/or perform additional monitoring. If methane is detected at a concentration greater than the LEL in the gas monitoring probes at the property boundary, Omni will perform the activities described in Section 4.5.4 below.

4.5.3 Monitoring for Objectionable Odors at the Property Boundary

Omni's on-site personnel will perform monitoring for objectionable odors at the property boundary on a regular basis. If objectionable odors are detected at the property boundary, Omni will perform the activities described in Section 4.5.4 below. It should be noted that no off-site occupied structures currently exist near the property boundary.

4.5.4 Detecting Exceedances of the Regulations

Should the results of the gas monitoring indicate that the requirements of Section 62-70.530(1) have been exceeded at the facility, Omni will:

- immediately take all necessary steps to ensure protection of human health and notify the FDEP;
- within 7 days of an observed exceedance, Omni will submit to the FDEP for approval, a plan to remediate the landfill gas migration; and
- within 60 days of an observed exceedance, Omni will complete the remediation, unless otherwise directed by FDEP.

4.6 Landfill Active Area Controls

4.6.1 Litter Control

Maintaining proper litter control is essential to the operation of a landfill. When working in areas below natural grade, litter is less likely to escape than when working above natural grade. Litter control procedures for the landfill are discussed below.

4.6.1.1 Prevention of Litter on the Working Face

Litter will be minimized as follows:

- Following proper techniques at the working face may prevent a considerable amount of potential litter by reducing the amount of refuse exposed to the wind. Where possible, the exposed face of the cell will be oriented into the wind. This will cause the wind to blow any loose litter back into the working face and helps keep waste away from the undercarriages of unloading vehicles, which may track the waste along the public roadway as they exit the facility. The compacted waste already on the face helps trap litter.
- When top discharging, refuse will be placed as usual and spread downward. When possible, the exposed face of the fill will be oriented away from the wind for the same reasons bottom discharging is oriented into the wind.
- Compacted waste will be covered as soon as practical to minimize blowing litter.

4.6.1.2 Control of Litter with Litter Fences

Litter that escapes from the working face of the fill area may be controlled by litter fences. Movable/permanent fences may be positioned near the working face as wind and fill operations change. Permanent litter fences may also be placed around the perimeter of the fill areas for additional litter control.

4.6.2 Buffer Maintenance

Litter may occur even with proper litter controls. The following clean-up and maintenance procedures will be followed on a routine basis to maintain the buffer areas:

- Litter clean-up from along fences and buffer vegetation: Litter will be removed from and along litter fences and vegetation as necessary. Litter will not be allowed to accumulate in buffer vegetation.

- Clean-up along on-site roads and buffer areas: Litter occurring along on-site roads and in buffers will not be allowed to accumulate. This litter will be cleaned up as necessary.
- Clean-up at entrance area and entrance road: The site entrance and the road leading to the entrance (¼ mile each direction) will be inspected daily. These locations will be cleared of litter as necessary.
- Vegetation will be maintained and supplemented as necessary in order to provide an adequate visual screen.

4.6.3 Dust Control

Dust control will be practiced during operation of the landfill by the application of water sprays from a water tank truck. The frequency of application of water for dust control will depend on site conditions and specific operation being performed. When necessary, water will be sprinkled on all heavily used roads. The main access road will be regularly sprayed to control dust when required.

4.6.4 Vector Control

Vectors, animals, or insects will be minimized. Maintaining the working face as narrow as possible, providing initial cover on exposed areas, and eliminating water ponding are the primary safeguards against vector problems. Well-compacted wastes and cover material effectively prevent vectors emerging from or burrowing into wastes. Inspections of the waste tire storage area will be performed necessary to monitor the area for the presence of rodents and mosquitos.

If problems with rodents or insects occur, monitoring and surveys for vectors will be conducted to verify the effectiveness or identify and implement improved vector control practices, including the use of traps and insecticides.

4.6.5 Noise Control

All equipment powered by internal combustion engines will have mufflers installed and maintained in good repair. Screening berms will also be used, when possible, to deflect sound upward.

4.6.6 Recordkeeping

An operating record will be maintained at the site including all records, reports, analytical results, demonstrations and notifications; any construction, operation, and closure permits, including all modifications to those permits, issued by the FDEP, along with the engineering drawings and supporting information; as well as training verifications. This record will be kept with the operation plan at or near the landfill facility, or in an alternate location designated in the operating permit which is readily accessible to landfill operators. The operating record will be available for inspection at reasonable times by the FDEP and maintained for the design period of the landfill.

As part of the operating record, waste records will be maintained. These waste records will indicate the amount of each type of solid waste received each day, and the reporting and record keeping procedures outlined in the Auto Shredder Residual Recycling Plan (Appendix F) and Waste Tire Storage and Processing Plan (Appendix G). Waste reports, summarizing the waste records will be compiled monthly and copies will be provided to FDEP quarterly. The waste records will be kept with the operation plan at the landfill and will be available for inspection at reasonable times by the FDEP. These records will be kept for the design period of the landfill.

The operating record will also include the information and observations resulting from each random inspection of a waste load conducted as part of the load checking program as described previously in Section 2.2.2.

The operating record will also include:

- the quantities of leachate collected by the primary leachate collection and removal system, and the secondary leachate detection and removal system, in gallons per day; and
- a record of the daily precipitation at the landfill based on the rain gauge installed, operated and maintained at the landfill.

This data will be used to calculate the monthly leachate generation rates expressed as a percentage of the monthly precipitation.

In addition, the operating record will also include the following:

- records of all information used to develop or support the permit applications and any supplemental information required;

- records of all monthly information, including calibration and maintenance records, and water quality records; and
- an annual estimate of the remaining life and capacity in cubic yards of the existing, constructed landfill and remaining life and capacity of other permitted areas not yet constructed. This estimate will be reported annually to FDEP.

The operating records will be maintained at the landfill throughout the design life of the landfill. Records that are more than five years old which are required to be retained may be archived, provided that the landfill operator can retrieve them for inspection within seven days.

5. EMERGENCY CONTINGENCY PLAN

5.1 Introduction

This section identifies a set of unplanned circumstances that may occur at the landfill. If handled correctly, the damage or impacts from these problems can be minimized. This section presents procedures to follow for dealing with problems as they occur. Operating personnel will become familiar with the procedures in order to prevent environmental contamination or damage to landfill facilities.

The entrance to the facility allows emergency vehicles immediate access to the landfill by police, fire, and ambulance.

Appendix C presents a list of individuals and emergency response agencies to contact. This list will be posted near all telephones on-site to provide "ready" access to emergency response agencies.

Within 24-hours, the Florida Department of Environmental Protection (FDEP), Central District, shall be notified of any fire or other emergency which poses an unanticipated threat to the public health or the environment. The notification can be made by telephone or e-mail at the contact information listed in Appendix C. Within two weeks of any emergency, the operator of the site shall submit to the Department a written report on the emergency. This report shall describe the origins of the emergency, the actions that were taken to deal with the emergency, the results of the actions that were taken, and an analysis of the success or failure of the actions.

This plan is organized by subsection and contains specific plans to address each type of occurrence listed below:

- fire;
- accident or injury;
- release of contamination to environment;
- hazardous waste;
- uncooperative customers;
- inclement weather; and
- problems with the leachate collection and leachate removal systems.

5.2 Fire Control Plan

The below procedures will be followed in the event of a fire at the facility. Additional fire prevention measures for the waste tire storage and processing operations are presented in Section 6 of the Waste Tire Storage and Processing Plan provided in Appendix G.

5.2.1 When Fire Occurs

The following procedures will be followed in the event of a fire at the facility:

- extinguish small fires with fire extinguisher or smother with soil - do not remain near large fires or explosive materials;
- determine location, extent, type, and, if possible, cause of fire or explosion;
- notify on-site personnel and implement safety and fire control procedures;
- if the fire is located at the waste tire storage and processing area, determine if there is a possibility of discharge of oily materials generated by burning tires. If so, implement measures to contain the oily materials within the storage area (i.e., blocking the storm water discharge pipe at the storage pad and installing absorbent sock type materials; and
- notify Landfill Site Manager if the fire cannot be immediately controlled;
- notify fire department if necessary. Clearly state:
 - location of landfill,
 - location of fire or explosion in landfill,
 - extent of fire or explosion,
 - type of fire or explosion,
 - actions now being taken, and
 - injuries;
- notify rescue squad, if necessary;
- notify health care facility, if necessary;
- notify sheriff, if necessary; and

- notify cleanup company for oily material generated at waste tire storage area, if necessary.

5.2.2 "Hot Load" Procedures

In the unlikely event that a "hot load" is not identified before entrance into the facility, the following procedures are implemented:

- the truck carrying the "hot load" is to be directed to discharge the load in the landfill but away from the working face and any exposed liner;
- the load is to be placed on top of intermediate cover which will provide sufficient protection between the "hot load" and the underlying waste;
- soil will be spread over the load to smother the "hot load"; and
- the "hot load" will be monitored until there is no evidence of smoldering or high temperatures.

At the end of the day or when appropriate, the load will be worked into the active working face. Areas where "hot loads" are extinguished varies depending on the location of the working face, but will always be away from the working face and any exposed liner.

5.2.3 Fire Extinguishers and First Aid Kits

Fire extinguishers and first aid kits will be installed in the following locations:

- office building/ticket house/weigh station/maintenance shop;
- selected on-site vehicles and equipment; and
- waste tires storage and processing location.

5.3 Accident or Injury

5.3.1 When an Injury Occurs

When an injury occurs, the following procedures will be implemented:

- shut down equipment in the immediate vicinity as is appropriate;
- determine extent of injuries (location, seriousness);
- apply pressure (compress) on wound to stop severe bleeding;
- if victim is not breathing and has a pulse, administer rescue breathing, if trained;
- if victim has no signs of circulation, administer CPR, if trained;
- DO NOT MOVE VICTIM(S), unless:
 - victim is still in danger, or
 - victim can move self without great pain;
- have someone phone rescue squad (911) unless injuries are clearly minor, and provide the following:
 - clearly state location, and
 - describe injuries;
- stay with and keep victim(s) warm;
- notify Landfill Site Manager;
- transport victim(s) to a nearby medical center if:
 - injury is not serious, but requires medical attention (e.g., broken fingers, minor burns), and
 - victim(s) can move self without great pain;
- notify sheriff, if necessary; and
- apply first aid, as described below:
 - Landfill Employees - Minor accidents, such as bee stings, minor cuts, and small burns may be treated on site by an employee trained to administer first aid, and
 - Customers - First aid treatment will not be given to customers who have minor accidents at the site. However, personal information about the victim and a

description of the accident will be obtained. The customer will be instructed to go to his/her doctor for examination and treatment, if required.

5.3.2 Procedures After an Accident

The following procedures will be implemented in the event of an accident:

- **Accident Investigation** - The Landfill Site Manager will make a complete investigation of the accident and events leading up to the time of the accident. The investigation will be started as soon as possible after the accident. All witnesses to the accident and persons involved in the accident will be interviewed.
- **Determination of Cause** - After the facts about the accident have been gathered, the Landfill Site Manager will make a determination as to the cause(s) of the accident.
- **Filing of Reports** - The Landfill Site Manager will complete and file the appropriate accident report forms.
- **Corrective Steps** - After a thorough investigation and determination of the cause(s) of an accident, the Landfill Site Manager will take corrective steps so that the same type of accident will not re-occur. These corrective steps may take the form of repair of faulty equipment, installation of safety equipment, or instruction of personnel in safe operating procedures.
- **Discussion with Employees** - If it is determined that the cause(s) of the accident were related to employee work habits and that remedial safety instructions would be helpful, a meeting with site employees will be held. The accident and the corrective measures that will be taken will be discussed to prevent another accident. All employees will be instructed in proper safety procedures which should be followed.
- **Follow-up** - The Landfill Site Manager will follow-up the corrective measures to make certain that proper safety precautions are being taken. All unsafe practices will be called to the attention of the employees.

5.4 Release of Contamination to Environment (Remedial Response)

5.4.1 Response

If contamination is released to the environment, the following procedures will be implemented:

- determine location, extent, type, and, if possible, cause of release (e.g., leachate, contaminated surface water, fuel spill, etc.);
- notify Landfill Site Manager and implement safety and emergency response procedures;
- notify fire department. State clearly:
 - location of landfill,
 - location of contaminant release,
 - extent of release,
 - type of release, and
 - actions now being taken; and
- notify proper authorities including the Florida "Hot Line".

A list of individuals and emergency response agencies to contact in the event of a release of contamination to the environment is provided in Appendix C.

5.4.2 Follow-Up

Unless the occurrence of a contaminant release is clearly due to very unusual circumstances, the Landfill Site Manager will take corrective action to prevent recurrence of the release. The corrective action will be approved by the FDEP.

A report will be filed at the landfill by the Landfill Site Manager in order to have further reference for inquiries by authorities or Omni personnel. The report will state:

- time/date of incident or its discovery;
- type of release and effects;
- source;

- response and effectiveness;
- agencies contacted; and
- corrective actions planned and scheduled.

5.5 Hazardous or Other Unauthorized Materials

In the event that a substance known to be or suspected of being hazardous is dumped from any vehicle at the waste disposal facility, the actions described below will be taken immediately.

5.5.1 The Observer

The Observer will take the following actions:

- Immediately report the incident to the Landfill Site Manager or their designee.
- Avoid exposure to the substance in question. Stay upwind.
- Observe where the material was dumped, by whom (which vehicle), how much was dumped, whether the container appears sound or is leaking, and what the substance looked and smelled like. Such observations will only be made with extreme caution and with the utmost regard for safety. **DO NOT SNIFF OR TOUCH THE SUBSTANCE.**
- Ask the individual who dumped the suspect load where the material was obtained.
- Isolate the approximate area of the suspected load before it is covered or mixed with wastes from other vehicles.
- Ask the driver of the vehicle to remain at the dumping point to ensure adequate vehicle identification. If the driver attempts to leave the discharge point, the observer should inform the Scale master and/or the Landfill Site Manager.

5.5.2 Landfill Site Manager

The Landfill Site Manager will take the following actions:

- Notify the FDEP.
- Record all pertinent facts regarding vehicle, including but not limited to: name of carting company; license plate number; where the load was obtained, if known; any visible evidence identifying the waste substance; and quantity and state of the substance (e.g., solid or liquid or if contained or loose).
- Maintain careful records of other costs incurred as a result of the dumping incident including, but not limited to, security costs in isolating the area, costs of removal (by contract or otherwise) of the suspect material, other costs of intermediate or ultimate treatment and/or disposal, and any other pertinent costs.
- Coordinate the removal of the unacceptable waste with the proper authorities.

5.5.3 Non-Discharged Load

If, before a waste load can be discharged (e.g., during inspection), it is discovered to contain, or is suspected of containing hazardous or other unauthorized materials, the same reporting procedures by the Observer and Landfill Site Manager described for the discharged loads still apply, except concerning the discharging itself. In addition:

- inform the driver that his load is unacceptable and why;
- do not permit the load to be discharged; and
- suggest to the driver that he phone the FDEP to determine what he should do with the load.

5.6 Uncooperative Customers

The following actions will be implemented if a customer will not obey site rules or cooperate with site personnel.

- if the customer is creating a substantial problem involving their or other's safety, or significantly interfering with disposal operations, the Landfill Site Manager will decide what action should be taken;
- if the customer is creating a minor nuisance and does not respond to polite suggestions, the employee will record the vehicle description and license number,

and report the incident to the Landfill Site Manager or home office management;
and

- in a case where a customer causes or threatens to cause harm to landfill property or personnel, or otherwise interferes with safe operation of the landfill, the Landfill Site Manager will contact the Sheriff.

5.7 Inclement Weather

5.7.1 Operation in Wet Weather

<u>Problem</u>	<u>Solution</u>
Saturated Unloading Area	<ol style="list-style-type: none"> 1) Stockpile well-drained soil and apply as necessary. 2) Keep compactors off area; use dozers on unloading area. Unload and push refuse perpendicular to area. 3) Grade unloading area slightly to permit runoff.
Mud Carried Onto Access/ Public Roads	<ol style="list-style-type: none"> 1) Carefully scrape mud from pavement. 2) Provide clean rock dressing to internal access roads. If internal access roads are properly maintained, then dirt on the tires of disposal vehicles will be thrown off prior to reaching public access roads.
Cover is Wet/Unworkable	<ol style="list-style-type: none"> 1) Maintain compacted, sloped stockpiles. 2) Use alternate cover approved by permit.

5.7.2 Preparation for Inclement Weather

The following preparations will be made for inclement weather:

- Wet weather areas will be prepared during periods of dry soil conditions. The wet weather area will be constructed close to an all weather road. Work on the wet

weather area will be performed at various times when personnel and equipment are not required for other higher priority assignments.

- Access roads around the site will be maintained as necessary. These roads will be maintained in a serviceable condition with the use of the available equipment on site, such as grader, water truck, dozer and loader. Major repairs will be scheduled, if required.
- Drainage structures, ditches, and sediment control will be checked to ensure they are in good condition and free of significant debris prior to anticipated heavy rains.
- Temporary (Operations Area) Drainage Control - cover material, rock/sand, aggregate, and corrugated metal pipe, will be stockpiled for use in an emergency situation.
- When periods of high wind are predicted, litter fencing will be moved to close proximity of the working face and in the expected downwind direction. Cover may be required frequently during the day.

5.7.3 Preparation for Severe Weather or Hurricanes

In addition to the activities listed in Section 5.7.2 above, the following preparations will be made for severe weather or hurricanes. The following activities will be performed before and after the severe weather condition.

72 hours prior to event

- Pick up any loose debris from the site
- Call supplier to top off all on-site fuel tanks
- Assess inventory
- Test generators
- Make final supply run for non-perishable food items and drinking water

48 hours prior to event

- Continue with housekeeping efforts
- Perform administrative building flood prevention (to protect documents, equipments, furniture, etc.)
- Continue to evaluate situation pertaining to alternate sites

- Inform customers of expected service
- Supply written instructions to all employees (by Omni human resource department)
- Allow employees time to secure their respective belongings

24 hours prior to event

- Continue with housekeeping efforts
- Fit plywood shutters where necessary
- Distribute phone numbers to all employees
- Inform customers & corporations of possible cessation of operations

12 hours prior to event

- Secure the facility
- Fuel all vehicles and heavy equipment
- Park all track machines and rubber tire equipment close together (at ground level, i.e., off the top of the landfill)

Post - Event

Key personnel (facility manager, operations manager, and certified operators) to assess site
Contact all employees
Initiate clean up/recovery of the facility
Use of non-essential office staff for miscellaneous duties
Resume limited or complete operations

5.8 Problems Affecting the Leachate Collection and Removal Systems

5.8.1 Interruption of Power Service to the Landfill

The ability to switch over to the secondary power supply allows the leachate collection and removal systems to continue operating with virtually no interruption. In the event that the main power service to the landfill is interrupted for more than 24 hours, the site will be switched over to the secondary power supply system consisting of diesel generators.

5.8.2 Interruption of Flow to Leachate Storage Facility

In the event that leachate flow to the leachate storage facility is temporarily interrupted, the leachate will be stored in the active cell(s). If the system cannot be restored within a

reasonably acceptable period, leachate will be pumped directly from the sump to tanker trucks for off-site treatment.

5.8.3 Primary Leachate Sump Alarm Level Switch

An alarm level switch will be installed in one of the primary leachate sumps to notify the operator in the event that leachate levels in the sumps reach this level. The intent of the alarm is to notify the operator of a potential problem with the leachate pumps or piping. The alarm may indicate that either one or possibly both of the primary leachate pumps may have stopped working, the pumping capacity of both pumps has been exceeded, the storage containers are full, or there is possible blockage in the leachate transmission line. The operator shall observe the leachate pumps, pump control panels and flow meter to determine if either or both of the pumps are working. If at least one of the pumps is operational and there is no blockage in the leachate transmission line the operator will open the gate valve located in the secondary leachate manhole. By opening this valve leachate from the adjacent primary sump may flow into the secondary leachate sump for pumping. The operator shall record the flow meter reading on the secondary leachate sump pump prior to opening the gate valve. The operator shall also record the date and time of the occurrence and reason why the valve was opened (i.e., primary pumps failed, excessive leachate flow, etc.). The operator shall monitor the pumping of leachate to determine if the high leachate levels were associated with the pumps. The operator shall also examine the leachate transmission line manholes, piping and storage tanks assess any other potential problem. The leachate pumping system will require troubleshooting to determine the cause of the leachate build-up in the primary sumps and malfunctioning/inoperable pumps shall be replaced or repaired as soon as practical.

5.8.4 Managing Hazardous Leachate

In the event the leachate quality monitoring indicates the leachate is a hazardous material, the leachate will be managed in accordance with Chapter 62-730 of the FAC.

6. SAFETY PLAN

6.1 Emergency Procedures

- Posting of Procedures - All emergency procedures (Emergency Contingency Plan - Section 6 of this Operation Plan) will be updated as appropriate and after each emergency, if required. All emergency procedures will be posted in the Landfill Site Manager's office, in conspicuous places at the site, and at the gate house.

The name, location, and telephone number of the nearest doctors, medical treatment facilities, and ambulance services (contained in Appendix C of this plan) will be posted in the Landfill Site Manager's office and all occupied buildings (i.e., maintenance building, gate house and office).

- Instructions on Procedures - All new personnel will be instructed on the emergency procedures used at the landfill. All employees will be informed of any changes in emergency procedures.
- Responsibility of Employee - It is the responsibility of every employee to know and remember their role in each emergency procedure at the site.

6.2 General Safety Practices

- Knowledge of Procedures - All employees at the landfill will know the proper procedures for reporting accidents, injuries, and fires.
- Posting of Information – Roadway limits within the landfill footprint will be clearly posted as necessary. Site speed limits will be clearly posted on the main access road. Direction of travel and location of curves will also be posted. The location of disposal areas will be clearly indicated.
- Site User Rules - Site user rules will be posted at the entrance to the landfill. Employees will watch for violations. Employees will explain rules to violators, stressing that the rules are for their protection. As a last resort, the Landfill Site Manager will notify the County Sheriff's Office for further action.
- Discharging Loads - For safe operations, the discharging area will be only slightly sloped (for drainage) at all times and equipment maintained in good repair.

- Safety Devices - Proper safety devices, such as roll-over protective cabs, will be installed on all equipment and kept in good repair.
- Fire Extinguishers - Fire extinguishers will be provided in buildings and on equipment. Each extinguisher will be appropriate for the types of fires likely and they should be checked or serviced as appropriate. Discharged (even partially) fire extinguishers will be removed and replaced with fully charged units.
- First Aid Kits – First aid kits will be maintained in the main office building and in select site vehicles. An inventory of the first aid supplies should be maintained in order to re-supply the first aid kits when items used.
- Safety Meetings - Safety meetings will be regularly scheduled. Situations that can cause accidents and ways to prevent them will be discussed. Also, the effectiveness of corrective actions following accidents at the site will be discussed.
- NO SMOKING will be allowed within the landfill area or near fuel storage facilities.

6.3 Safety Equipment

Certain safety equipment is specified for equipment operator protection. It is the responsibility of every employee to ensure that their safety equipment is in good condition. All employees are to use their safety equipment at appropriate times. The safety equipment recommended for equipment operators is listed in Table 4.

6.4 Site User Rules

The following set of rules will be observed at the landfill.

- No Smoking - Users will not smoke on the site.
- Children and Pets in Vehicles - Individuals (children and pets) not involved in unloading refuse will remain in the vehicle.
- Persons Unloading to Remain Near Vehicle - Persons unloading will remain within 10 ft (3 m) of their vehicle at all times.
- No one will be allowed to ride on the outside of a vehicle while on site.

- Discharge Waste Behind Vehicle - Whenever possible, waste will be discharged immediately behind the unloading vehicle.
- Unloading - No unloading by non-mechanized trucks or passenger cars is to be done using rapid acceleration or deceleration of the vehicle.
- Keep Tools in Vehicle - Tools, removable tailgates, sideboards, wheelbarrows, ladders, and tarps will be kept in, on, or under the vehicles being unloaded to prevent damage to other vehicles or site equipment.
- Speed Limit - The posted speed limit within the landfill site will be enforced. Operating personnel will direct users to further reduce their speed when justified by site conditions.
- No Scavenging - Scavenging is not permitted at the landfill site.
- No Shooting - Firearms are not permitted at the landfill site.
- No Explosives - Explosives are not permitted at the landfill site.

7. FINAL CLOSURE

7.1 Introduction

The JED facility will be closed as sections of the landfill reach final design elevations. The final cover system components are described in Section 7.2. Seeding and planting requirements are described in Section 7.3. Erosion minimization activities are described in Section 7.4. The final cover drainage system is described in Section 7.5.

7.2 Final Cover System Components

The cross section of the final cover system on the top slopes of the landfill is shown in the permit drawings and consists of, from top to bottom:

- a 0.5-ft (0.15-m) thick vegetative layer;
- a 1.5-ft (0.45-m) thick vegetative support layer;
- a 40-mil (1-mm) thick polyethylene (PE) geomembrane; and
- a 1-ft (0.3-m) thick intermediate cover layer.

The cross section of the final cover system on the side slopes of the landfill is shown in the permit drawings and consists of, from top to bottom:

- 0.5-ft (0.15-m) thick vegetative layer;
- a 1.5-ft (0.45-m) thick vegetative cover layer;
- a geocomposite drainage layer;
- a 40-mil (1-mm) thick PE geomembrane; and
- a 1-ft (0.3-m) thick intermediate cover layer.

The final cover system incorporates a geomembrane, which significantly reduces infiltration into the landfill cells. The grades of the final cover system are 3H:1V on the side slopes between benches and 5.0 percent on the top slopes.

7.3 Seeding and Planting

A vegetative cover will be established for the JED facility in order to minimize erosion on the final cover. Grass will be propagated by hydroseeding, sodding or by other equivalent method in order to promote vegetative growth on the slopes of the final cover as construction of the cover progresses.

An initial watering schedule will be developed at the time of closure, and will be dependent on whether the landfill is closed in the dry season or the rainy season. The grass will be watered and fertilized, as necessary, to ensure continued growth.

7.4 Erosion Minimization

Erosion of the final cover system will be minimized by final cover swales. The swales will intercept sheet flow from the final cover system. The final cover swales will direct the collected surface-water runoff to downchutes and the perimeter swale.

A vegetative cover will be placed on the final cover slopes of the landfill as described in Section 7.3. This vegetative cover will minimize erosion and reduce soil loss from the final cover system. The final cover system will be periodically inspected and erosion damage or vegetative stress observed during these inspections will be repaired before significant erosion has a chance to develop.

7.5 Drainage

Drainage swales are proposed on the final cover system to intercept the surface water runoff from higher elevations and direct the water via downchutes to the perimeter ditches around the landfill perimeter. The surface water flow direction on top of the final cover is illustrated in the permit drawings.

As required, the swales, downchutes, culverts, and perimeter ditches will be maintained on a regular basis. Significant sediment and debris, which has accumulated in the swales, culverts, and perimeter ditches will be removed to facilitate flow and prevent overflow. Significant sediment and debris is considered any amount that impedes flow in the swale or any buildup greater than 0.5 feet.

8. BORROW AREA OPERATIONS

8.1 Overview

Fill material needed for the JED facility construction and daily operations will be borrowed from excavations, or pits, located in the areas indicated on the Permit Drawings. Prior to any borrow activities in the location designated as Borrow Area A, the storm water management berm, in its interim configuration, will be constructed and vegetated. The outside toe of this berm will be constructed no closer than 25 feet to the nearest wetland boundary. In subsequent stages of the landfill development, the storm water management berm around Borrow Area A will be raised to its final height prior to the edge of the borrow excavation getting closer than 250 feet from the inside toe of the berm.

The development of Borrow Areas B and C will be undertaken in future phases of the JED facility development. It is anticipated that these areas will be developed in a manner similar to Borrow Area A except that the perimeter berm will be replaced with a wire-reinforced silt fence. The plan for borrow area operations in the Borrow Areas B and C may be reviewed based on the experiences gained from operation of Borrow Area A during construction.

Two methods are proposed for excavating fill material from the borrow areas. These methods include: (i) mechanical excavation without dewatering (i.e. wet excavation) and/or (ii) dewatering the borrow area (i.e. dry excavation) and excavating fill using conventional earth moving equipment. Both methods are to be implemented in a manner which will minimize impacts to adjacent wetlands.

8.2 Wet Excavation

Wet excavation is expected to be the primary method of borrow area operation during construction at the JED facility. This method of borrow area operation will require removal of soil materials from the pit without first dewatering the pit. Initially, the area will be cleared and grubbed and the topmost organic soil layers will be stripped and used for construction of the perimeter berm or stockpiled for future use. Next, typical excavation equipment such as a dragline or backhoe excavator will be positioned to remove soils and temporarily stockpile the material on the surface adjacent to the excavation. The slope of the temporary stockpile area will be maintained to channel excess water back to the open excavation or to allow infiltration. A bucket-loader or other suitable equipment will maintain the temporary stockpile and will load trucks or pans used to haul the material to the area of current construction or to designated stockpile areas.

All borrow areas will be developed from the center of the designated area towards the outer perimeter. The excavation equipment will continuously move around the perimeter of the borrow area excavation. After digging to the equipment's optimum depth, the equipment will move in a clockwise or counterclockwise direction to continually expand the pit until it reaches the final planned dimensions.

8.3 Dry Excavation

Dry excavation will be the alternative method of borrow area operation at the JED facility. This method of borrow area operation requires dewatering of the borrow area prior to removal of soil materials. Initially, the borrow area will be cleared and grubbed and the topmost organic soil layers will be stripped and used for construction of the perimeter berm or stockpiled for future use. Next, a ditch recharge system will be constructed between the area to be dewatered and adjacent wetland areas, which may be affected by the dewatering activities. The purpose of the ditch recharge system is to maintain a ground water level between the dewatered pit and the adjacent wetland, which will prevent detrimental affects to the wetland area. It is anticipated that Omni may be required to obtain a water use permit from the South Florida Water Management District for the dewatering system if daily pumping quantities exceed 100,000 gallons. In conjunction with the water use permit application, a detailed layout of the recharge ditches, sequence of developing the dry pit, and location of pumps will be prepared.

The groundwater will be lowered in the borrow pit as the soil is excavated to provide trafficability in the excavation for equipment performing the excavation. It is anticipated that earth will be moved using self-loading pans, dump trucks loaded by backhoe, or other suitable heavy equipment, which will cycle through the borrow area to load and to the construction or stockpile site for unloading. As the excavation is progressively deepened, the ground water elevation in the excavation will be lowered ahead of the excavation bottom elevation. All water taken from the pit will be deposited in the recharge ditches, where it will maintain the ground water level in adjacent wetlands.

TABLE 2

**HEAVY EQUIPMENT REQUIREMENTS ⁽¹⁾
FOR RECEIPT OF UP TO 3,000 TONS OF WASTE PER DAY
JED FACILITY**

	Equipment On-site
Chevy 1500 1/2 ton pick-up	1
Caterpillar 12G Motor Grader	1
CAT 613 Water Wagon	
6" water pumps	1
4" water pumps	1
Caterpillar D6 Dozer	1
Volvo Articulating Hauling Truck	2
Caterpillar 330 Excavator	1
Caterpillar 836 compactor	2

Note:

- ⁽¹⁾ Equipment manufacturers' names are provided to indicate the approximate size and/or capacity of the equipment. The specific manufacturer for this equipment is not required but similar size is.

TABLE 3
HEAVY EQUIPMENT RENTAL COMPANIES
JED FACILITY

<u>Name of Rental Business</u>	<u>Phone Number</u>
United Rental	(407) 332 – 1470
Lundquist Excavating	(407) 847 – 9419

TABLE 4
OPERATOR PROTECTIVE EQUIPMENT
JED FACILITY

Equipment: Each piece of heavy equipment should be provided with:

- Safety restraint belt
- Roll-over bars
- Backup warning system
- Fire extinguisher

Personal: Equipment operators should have the following personal protective clothing and accessories:

- Ear muffs or ear plugs
- Safety glasses or face shields
- Rubber or leather (steel toe, shank) boots
- Work gloves
- Hard hats

APPENDIX A

TRAINING PLAN

APPENDIX B

WASTE INSPECTION PLAN

INTRODUCTION

This plan specifically addresses the inspection of routine, Class I waste loads for the exclusion of hazardous or otherwise unauthorized materials. The procedures in this text are intended to apply to routine Class I waste loads until a suspected hazardous or otherwise unauthorized waste is identified.

WASTE INSPECTION PROCEDURES

Upon arrival at the landfill property, each and every load of waste is stopped at the scale house to be logged in and weighed by the scale master. Waste arriving outside of the landfill's operating hours will be turned away by a locked gate. The site is accessible only by the main gate.

Once logged in and weighed by the scale master, the truck drivers are asked to confirm that they are hauling routine Class I waste. If the driver identifies the load as routine Class I waste, then one of the following procedures are implemented:

A) Open Topped Municipal Waste Haulers

If a truck is verbally identified to the landfill employees as hauling Class I waste, the truck contents are visually inspected to confirm that the load appears to contain exclusively Class I waste. This inspection is usually performed by looking down from on top into the open topped load, once the truck is un-tarped, by means of an elevated platform or "gantry" located adjacent to the scales. The presence of very noticeable or suspicious odors may trigger further analysis.

If the waste appears to be acceptable (**i.e., does not contain visible quantities of anything other than routine Class I waste**), then the truck is directed to the landfill active work face where it is visually inspected again by the spotter as it is unloaded and before it is spread and compacted. Any load discovered to contain potentially hazardous or otherwise unauthorized waste at this point is completely reloaded back into the waste truck and removed from the site. The rejected waste will not be authorized to re-enter the landfill site.

B) Class I Waste in Closed Containers

If a truck is verbally identified to the landfill employees as hauling Class I waste, but is not visually accessible for inspection at the gantry, the truck is forwarded to the active face of the landfill where its contents are inspected by the spotter as it is unloaded and before it is compacted or disposed. The inspection procedure at the active work face is identical to that

described in the previous section. Any load discovered to contain potentially hazardous or otherwise unauthorized waste at this point is completely reloaded back into the truck and removed from the site. The rejected waste will not be authorized to re-enter the landfill site.

RANDOM WASTE LOAD EXAMINATION

The Landfill Site Manager will examine at least three random loads of waste each week. The waste trucks selected for examination will be directed to the active face where the load can be visually examined upon unloading. Information and observations resulting from each random inspection shall be recorded in writing and retained at the landfill for at least three years. The recorded information, signed by the inspector, will include, at a minimum:

- the date and time of the inspection;
- the names of the hauling firm and the driver of the vehicle;
- the vehicle license plate number;
- the source of the waste as stated by the driver; and
- observations made by the inspector during the examination.

HANDLING HAZARDOUS WASTE

If any suspect wastes or wastes which could potentially be regulated hazardous wastes are identified by random load checking, or are otherwise discovered to be improperly deposited at the landfill, the Landfill Site Manager shall promptly notify the FDEP, the person responsible for shipping the wastes to the landfill, and the generator of the wastes, if known. The area where the wastes are deposited shall immediately be cordoned off from public access. If the generator or hauler cannot be identified, the Landfill Site Manager will assure the cleanup, transportation, and disposal of the waste at a permitted hazardous waste management facility.

HAZARDOUS WASTE TRAINING

The Landfill Site Manager, and all other staff who may be required to perform a waste inspection, will receive training in hazardous waste identification, as well as an evaluation of their knowledge and ability to effectively screen incoming waste according to this "Waste Inspection Plan".

All new landfill employees will be teamed up with experienced personnel for at least one week upon commencement of work as an inspector in order to receive immediate on-the-job training.

NOTIFICATION OF UNACCEPTABLE WASTE LOADS

The rejection of waste, pursuant to this plan, will be recorded in writing and filed on site for a period of one year. The pertinent information concerning the rejection, such as truck license number, assumed contents, volume, and other relevant data, will be recorded on a LOAD REJECTION FORM. The Landfill Site Manager will contact the generator, hauler, or other party responsible for shipping the waste to the landfill to determine the identify of the waste sources. The appropriate local officials will be notified by phone when the waste load is asked to leave the site and all pertinent information made available to them upon their request.

APPENDIX C

EMERGENCY RESPONSE AGENCIES

EMERGENCY RESPONSE COORDINATOR(S)

(Landfill Site Manager will be responsible at the facility. Below are names of the contacts.)

- 1) Matt Orr
1501 Omni Way
St. Cloud, Florida 34773
(407) 891 – 3720 (Office)
(863) 634 – 7177 (Mobile)
morr@wasteservicesinc.com (E-mail)

- 2) Mike Kaiser
1501 Omni Way
St. Cloud, Florida 34773
(904) 781 – 2407 (Office)
(904) 673 – 0446 (Mobile)
mkaiser@wsii.us (E-mail)

- 3) Shawn McCash
2893 Executive Park Drive, Suite 305
(Mobile)
Weston, Florida 33331
(954) 888 – 4302 (Office)
(561) 613 – 1405
smccash@wasteservicesinc.com (E-mail)

- 4) Dennis Pantano
1099 Miller Drive
Altamonte Springs, Florida 32701
(407) 261-5032 (Office)
(917) 359-5174 (Mobile)
dpantano@wsii.us

EMERGENCY RESPONSE TELEPHONE NUMBERS

Fire Department 911
(407) 343 – 7000 Non-Emergency

Sheriff's Office 911
(407) 348 – 2222 Non-Emergency

Rescue Squad 911
(407) 343 – 7000 Non-Emergency

Hospital (Florida Hospital) (407) 846 – 4343

County Manager (407) 343 – 2380

Florida "Hot Line" (904) 488-1320

Florida Department of Environmental Protection..... Business Hours (407) 894-3328
Central District After Hours (407) 894-7555
Gloria Depradine e-mail Gloria.depradine@floridadep.net

APPENDIX D

OPERATION AND MAINTENANCE PLAN FOR LEACHATE RECIRCULATION

APPENDIX E

WASTE SOLIDIFICATION OPERATION PLAN

APPENDIX F

AUTO SHREDDER RESIDUAL RECYCLING PLAN

APPENDIX G

WASTE TIRE STORAGE AND PROCESSING PLAN