

**AMENDMENT  
to the  
OCEAN COUNTY  
SOLID WASTE MANAGEMENT PLAN**

**August 18, 2010**



**PREPARED BY  
OCEAN COUNTY DEPARTMENT OF SOLID WASTE MANAGEMENT  
129 HOOPER AVENUE  
TOMS RIVER, NEW JERSEY 08754  
OCEAN COUNTY BOARD OF CHOSEN FREEHOLDERS**

- text printed on recycled paper-

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John C. Bartlett, Jr.  
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Ernest J. Kuhlwein, Jr., Director, Solid Waste Management  
John Haas, District Recycling Coordinator  
Oren Solon, Senior Planner  
Laura Benson, Assistant County Counsel

## **Plan Amendment: Medical Waste Facility**

The purpose of this Plan Amendment is to include a medical waste treatment/transfer facility into the Ocean County District Solid Waste Management Plan. MedAssure Services LLC, seeks to install a medical waste treatment/transfer facility within the Lakewood Industrial Park at 845 Towbin Avenue, Block 1160, Lot 237. The site currently contains a building that is occupied by Milspray: military technology; which provides painting and maintenance services for military products. Milspray has agreed to lease out a portion of their building that is currently unused, to MedAssure.

MedAssure's main focus will be to collect and inspect the incoming medical waste, treat the material to produce a sterilized product that is classified as Type-10 solid waste as defined by New Jersey regulations or transfer material to an authorized off-site treatment facility. Type-10 solid waste is classified as household, commercial or institutional waste and is accepted at landfills. The transformation of medical waste to Type-10 will be accomplished by using a Sanitec Microwave Disinfection Unit (MDU), which will be provided by Sanitec Industries.

### **Definition of Medical Waste**

- Waste that is defined by the United States Environmental Protection Agency as infectious wastes in 40CFR243.101.
- Waste that is defined by the United States Department of Transportation as infectious substance, diagnostic specimen, biological product, or regulated medical waste in 49CFR173.134.
- Waste that is defined by the State of New Jersey as "Regulated Medical Waste" in N.J.A.C. 7:26-3A.6.

### **Medical Waste Facility Process**

Upon receiving inbound material, MedAssure, will ensure that the medical waste delivered by a waste transporter is properly packaged in plastic reusable containers, cardboard boxes, or other containers that are in accordance with the NJDOT regulations. They will also verify that the material is placed in the required two-mil heavy-duty red plastic bag liner and placed into a container for transport with proper documentation. If the material is not properly packaged upon delivery, the material will be sent back to the generator. If the material is packaged properly, MedAssure will verify that each container is bar coded as to waste generator and waste transporter, scan each container for radioactive materials, and will weigh and record the results. The material will then be separated into one of two staging areas: facility waste processing/treatment process or waste repackaging and transfer operations.

The Material that is staged for the facility waste processing/treatment process will be processed through the Sanitec MDU. This machine will transform all the medical waste into Type-10, solid waste, which will be sent to an out of state approved disposal facility, and will also reduce volume by approximately 80%.

### **Sanitec Microwave Disinfection Unit (MDU)**

The Sanitec MDU is computer controlled and designed to shred and disinfect biomedical waste. The only manual labor that is required is bringing the medical waste that is loaded into either 96 or 200 gallons containers to the Sanitec MDU. The unit is equipped with a hydraulic lift that dumps the material into a hopper that is located on top of the machine. The hopper automatically seals and forces the material through a shredder by a feed arm. Once the material is shredded it falls onto an auger-driven conveyor. On the conveyor the material is injected with 300 degrees (Fahrenheit) steam and passed through a microwave section. The microwaves maintain uniform heating at a minimum of 203 degrees (Fahrenheit). The waste is then moved to a Temperature Holding Section, where the material will remain at 203 degrees for thirty minutes. The final product then falls into a waste transporter container that will be used to transport the disinfected solid waste to an out of state approved disposal facility.

A complete diagram of this operation can be found in the Appendix.

### **Operations**

- The maximum annual quantity of waste to be accepted at the facility shall be 7,500 tons. Two Sanitec MDU units will be available at the facility to process medical waste.
- The source of waste is to be any facility that generates medical waste as defined by the N.J.A.C. 7:26-3A.6, which would include doctors, dentists, clinics, labs, hospitals, hotels, schools, veterinarians, etc. that are located within Ocean County and surrounding counties. The treatment facility will only be available to customers that have signed service agreements with the facility.
- Class 2 pathological waste will not be accepted for processing through the MDU units.
- The final Type-10 solid waste product will be shipped to an approved solid waste disposal facility located outside of the State of New Jersey.
- Hours of operation are to be Sunday through Friday 5am-10pm. The building and surrounding fence will be secured with padlocks, cameras, and emergency 24-hour telephone number when not in operation.

- NJDOT approved transporters, such as vans, box trucks, and tractor-trailers, will deliver the medical waste material. It is estimated that about 6-8 box trucks and 4-5 vans will deliver waste per day and 1-2 trailers per week.
- NJDEP solid waste and air pollution permits are required for the installation of machinery and for operations.

### **Medical Waste Facilities in NJ**

At one time, there were over 30 medical waste facilities in New Jersey that treated and destroyed their own medical waste. All of these operations were on site and each used its own approved method to treat medical waste. Some of the methods included incinerators or other forms of technology that consisted of microwaves and grinders, chemicals and grinders, or autoclaves and grinders. All of those sites combined processed a portion of the 89,000 tons of medical waste that is generated in New Jersey each year. The remaining material was shipped out of state to other authorized facilities in order to be disposed of properly. Some of the locations accepted material from off site medical facilities.

Highlighted in Table 1, one can see that there are currently only 17 registered medical waste facilities in New Jersey. Of those 17 locations, two facilities do not treat medical waste; instead they only serve as collection agencies to ship the material out of State. In addition, two other facilities have ceased operations all together, leaving the total number of operational treatment facilities in New Jersey to be 13 locations. Of those 13 sites, nine operate by using MDU units.

**Table 1: Registered Medical Waste Facilities in NJ**

<u>Site</u>	<u>Address</u>	<u>Program Interest No.</u>	<u>Active Facilities</u>	<u>Collection Facilities</u>	<u>Ceased Operation</u>	<u>MDU Units</u>
Muhlenberg Medical Center	Plainfield, NJ 07061	RMW15	X			
St. Barnabas Medical Center	Livingston, NJ 07039	RMW11	X			X
Shering Plough Research Institute	Kenilworth, NJ 07033	RMW26	X			
Cooper Hospital University Medical Center	Camden, NJ 08103	RMW13	X			X
Holy Name Hospital	Teaneck, NJ 07666	RMW14	X			X
UMDNJ	Newark, NJ 07107	RMW22	X			X
Wyeth-Ayerst Research	South Brunswick, NJ 08906	RMW3	X			
JFK Medical Center (Health System Inc.)	Edison, NJ 08820	245531	X			X
Our Lady of Lourdes Medical Center	Camden, NJ 08103	RMW9	X			X
Hackensack University Medical Center	Hackensack, NJ 07601	261738	X			
St. Josephs Hospital Medical Center	Paterson, NJ 07503	RMW18	X			X
The Valley Hospital	Ridgewood, NJ 07451	RMW19	X			
Lab Corp.	Raritan, NJ 08869	RMW29	X			
Stericycle, Inc.	Bloomfield, NJ 07003	133682		X		
Veolia ES (Tech. Solutions LLC)	Flanders, NJ 07836	494362		X		
Virtua Health Systems	Camden, NJ 08104	132008			X	X
Memorial Hospital of Burlington Cty (Virtua)	Mount Holly, NJ 08060	RMW23			X	X

source: NJDEP, 2009.

### Demand for a Medical Waste Treatment Facility

Upon considering the amount of health care facilities that are presently operating in Ocean County it would seem that a demand for such a treatment facility is recognizable. A medical waste treatment/transfer facility will serve the ever-growing amount of doctor offices, clinics, labs and veterinarian hospitals that generate medical waste. Ocean County has four major hospitals, Southern Ocean County Hospital, Ocean Medical Center, Paul Kimball Hospital and Community Medical Center that all generate significant quantities of medical waste. These facilities currently encounter significant fees that are associated with tipping and transportation fees. Establishing a medical waste facility in Ocean County, will not only save those institutions operating expenses, but will also extensively reduce truck travel time, which results in lower diesel emissions that are presently negatively affecting our atmosphere.

The benefits of establishing a medical waste facility in Ocean County will go beyond medical facilities or institutions. Treating medical waste locally will increase the safety and welfare of Ocean County residents and environment. Having a local facility will aid in preventing improper disposal of medical waste which in the past has found its way to environmentally sensitive areas like the Barnegat Bay and Atlantic Ocean.

### **Conclusion**

Based on the aforementioned facts, MedAssure Services LLC, is consistent with the Ocean County District Solid Waste Management Plan, therefore MedAssure Services LLC, is included in the Ocean County District Solid Waste Management Plan as a medical waste treatment/transfer facility at Block 1160, Lot 237 in the Township of Lakewood, subject to obtaining all necessary state and local permits.

## **Appendix**

- A. Sanitec Permitted Installations
- B. MedAssure Services LLC, - Tax, Zoning and Sensitive Receptors Maps
- C. Facility layout - Drawing
- D. Equipment – Sanitec MDU System Diagram
- E. Resolution of Adoption – Solid Waste Advisory Council
- F. Resolution of Adoption – Board of Chosen Freeholders



APPENDIX A



SANITEC Permitted Installations (Partial List)

Alliance/Hospital Network, Inc. (2 Units)	Kalamazoo, MI USA
Ambiental Technologia (2 Units)*	Sao Bernardo, SP Brazil
American 3CI *	Birmingham, AL USA
Bristol Regional Medical Center	Bristol, TN USA
Canitec*	Regina, SK Canada
CAVO / MB (2 Units)*	Campinas, SP Brazil
Chevalier Enviro Services*	Manila, Philippines
Cleanaway Disposal*	Newcastle Australia
Columbia HCA Hospital at Medical City	Dallas, TX USA
Cooper Hospital/University Medical Center	Camden, NJ USA
ENOB*	Santos, SP Brazil
ENOB*	Jacari, SP Brazil
Environmental Health Systems, Inc.*	Mobile, AL USA
Envirotech of America (3 Units)*	Syracuse, NY USA
FKEPCO*	Safat, Kuwait
Forsyth Memorial Hospital	Winston-Salem, NC USA
Harris County Hospital District	Houston, TX USA
Holston Valley Hospital	Kingsport, TN USA
Holy Name Hospital	Teaneck, NJ USA
Integrated Environmental Systems*	Oakland, CA USA
IWASAWA*	Yokohama Japan
JFK Medical Center	Edison, NJ USA
Jikei Medical Center	Tokyo Japan
Kadlec Medical Center	Richland, WA USA
Korea Environment Corp*	Ansan, Korea
Madison Energy & Recovery Inc. (3 Units)*	Madison, WI USA
Magee Woman's Hospital	Pittsburgh, PA USA
Medical Microwave, Inc.*	Livingston, NJ USA
Medical Waste Transport, Inc.*	Sioux Falls, SD USA
Memorial Hospital of Burlington	Mount Holly, NJ USA
Millard Fillmore Hospital Downtown	Buffalo, NY USA
Millard Fillmore Hospital Suburban	Williamsville, NY USA
Moore Regional Medical Center	Pinehurst, NC USA

\* Denotes a commercial permitted processing facility

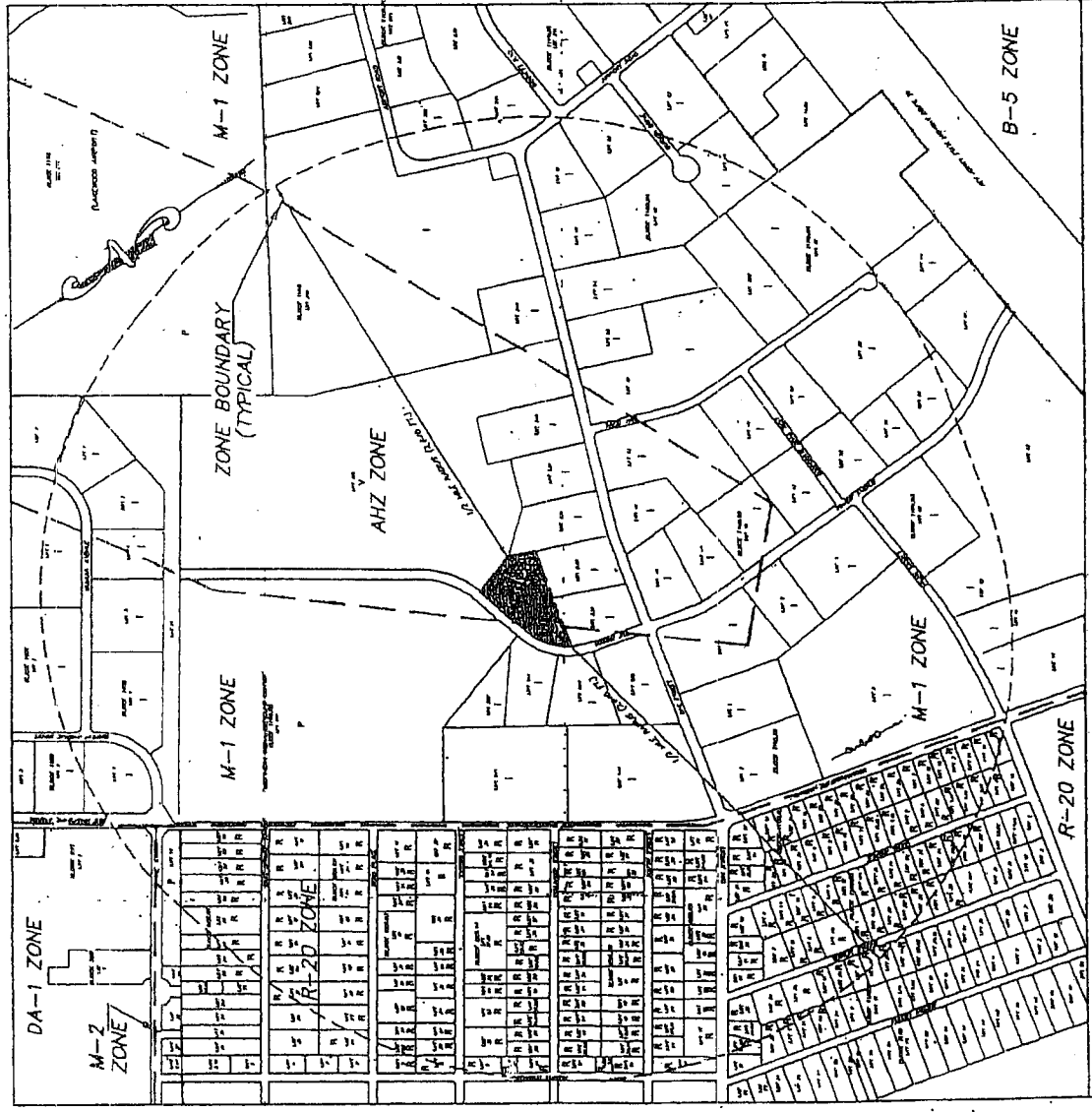


## SANITEC Permitted Installations (Partial List)

Narata Environmental*	Saga Japan
Nitto Shoji Co., Ltd.*	Kochi City Japan
Northwest Community Hospital	Arlington Heights, IL USA
Our Lady of Lourdes Medical Center	Camden, NJ USA
Parkland Hospital	Dallas, TX USA
Peninsula Regional Medical Center	Salisbury, MD USA
Polkacrest (2 Units)*	No. London, England UK
Safewaste Corp.*	Ashville, NC USA
Safewaste Corp.*	Fairfax, VA USA
Safewaste Corp./Johns Hopkins MC	Baltimore, MD USA
Safewaste Corp. (2 Units)*	Charlotte, NC USA
Sanitec of Kentucky*	Covington, KY USA
Stericycle, Inc. (2 Units)*	Sun Valley, CA USA
San Bernardino Co. Medical Center	Colton, CA USA
Seiko International (2 Units)*	Tokyo Japan
Southern Disposal Systems*	Decatur, AL USA
Southwest Medical Waste, Inc.*	Garden City, KS USA
St. Clare's Hospital	Dover, NJ USA
STEMAG*	Ribiero Preto Brazil
Target Waste, Inc.*	Mobile, AL USA
University of Alabama	Birmingham, AL USA
University of California-Davis (2 Units)	Sacramento, CA USA
University of California-Irvine	Orange, CA USA
University of Illinois-Urbana Campaign	Urbana, IL USA
University of Kochi Medical Center	Kochi City Japan
University of Medicine & Dentistry	Newark, NJ USA
VA Medical Center	Oklahoma City, OK USA
West Jersey Health Systems	Camden, NJ USA

\* Denotes a commercial permitted processing facility

FOR  
**MEDASSURE SOLID WASTE FACILITY**  
**LOT 237 IN BLOCK 1160**  
 (845 TOWNBIN AVENUE)  
 TOWNSHIP OF LAKEWOOD  
 OCEAN COUNTY, NEW JERSEY



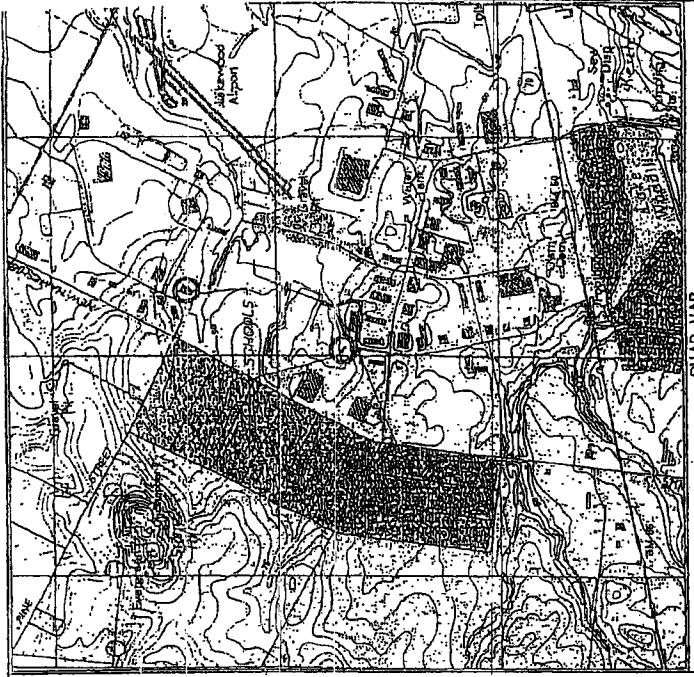
KEY MAP  
 R = 100' (LAKEWOOD TOWNSHIP TIA MAP)

INDEX OF DRAWINGS

SHEET #	DRAWING TITLE
1	COVER SHEET
2	FLOOR PLAN

LAND USES:  
 P=PUBLIC  
 I=INDUSTRIAL  
 R=RESIDENTIAL  
 V=YACANT

CONSENT OF DOCUMENTS  
 HAS BEEN OBTAINED FROM THE TOWNSHIP OF LAKEWOOD AND THE BOARD OF FREEHOLDERS OF OCEAN COUNTY, NEW JERSEY, FOR THE USE OF THIS MAP AS A BASIS FOR THE PROVISION OF PUBLIC UTILITIES AND AS A BASIS FOR THE PROVISION OF PUBLIC UTILITIES AND AS A BASIS FOR THE PROVISION OF PUBLIC UTILITIES.



QUAD MAP  
 1" = 100'  
 SOURCE: USGS QUADMAP MAP - LAKEWOOD OMA

SENSITIVE RECEPTORS

○ - DENOTES SCHOOL

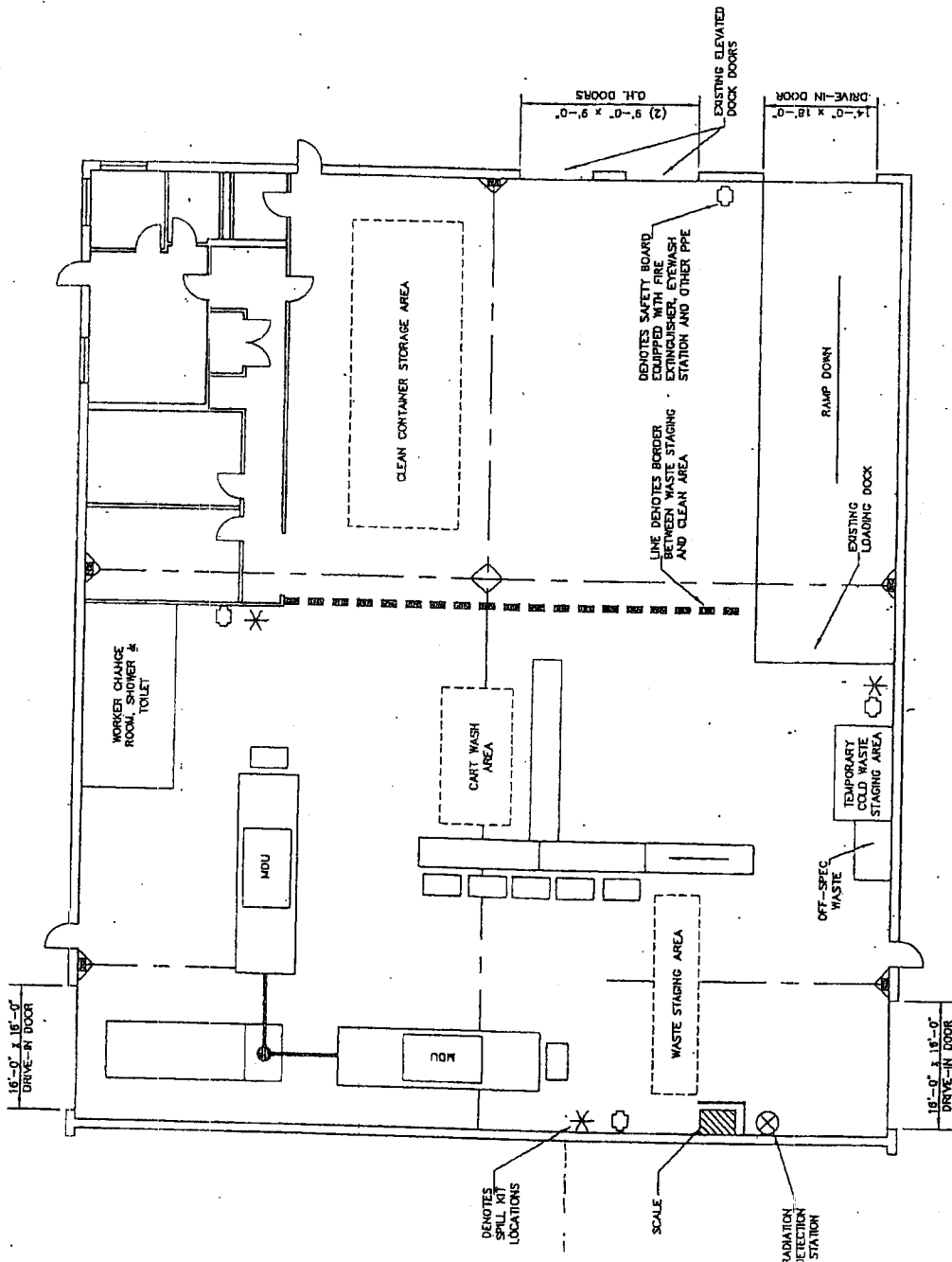
THERE ARE NO PLAYGROUNDS, CHURCHES, SYNAGOGUES OR PARKS WITHIN 1/2 MILE OF THE SITE

OWNER/APPLICANT  
 MEDASSURE  
 C/O JDC, INCORPORATED  
 LAKEWOOD, NJ 08760

PROFESSIONAL DESIGN SERVICES, LLC  
 1000 ROUTE 138, SUITE 200  
 LAKEWOOD, NJ 08760  
 (908) 853-1111 FAX (908) 853-1112  
 KEY: JDC STATE BOARD OF P.E. # 1111  
 JDC STATE BOARD OF P.E. # 1111  
**WILLIAM A. STEVENS, P.E., P.P.**  
 REGISTERED ENGINEER, CIVIL/ENR # 358

COVER SHEET  
 OF  
**MEDASSURE SOLID WASTE FACILITY**  
 FOR  
**LOT 237 IN BLOCK 1160**  
 (845 TOWNBIN AVENUE)  
 TOWNSHIP OF LAKEWOOD  
 OCEAN COUNTY

APPENDIX C



NOTES:

- LAYOUT PROVIDED BY SANITEC.

CONSULTING ENGINEER PLANS, ENVIRONMENTAL SERVICES  
 10000 W. 11TH AVE., SUITE 100, DENVER, CO 80202  
 TEL: (303) 440-1100 FAX: (303) 440-1101  
 WWW: WWW.PDS-ENVIRONMENTAL.COM

PDS  
 PROFESSIONAL DESIGN SERVICES, LLC  
 10000 W. 11TH AVE., SUITE 100, DENVER, CO 80202  
 TEL: (303) 440-1100 FAX: (303) 440-1101  
 WWW: WWW.PDS-ENVIRONMENTAL.COM

WILLIAM A. STEWARTS, P.E., P.P.  
 10000 W. 11TH AVE., SUITE 100, DENVER, CO 80202  
 TEL: (303) 440-1100 FAX: (303) 440-1101  
 WWW: WWW.PDS-ENVIRONMENTAL.COM

SANITEC PROCESSING FACILITY LAYOUT  
 MEDASSURE SOLID WASTE FACILITY  
 FOR  
 LOT 237 IN BLOCK 1160  
 TOWNSHIP OF LANSHOOD  
 OCEAN COUNTY  
 NEW JERSEY

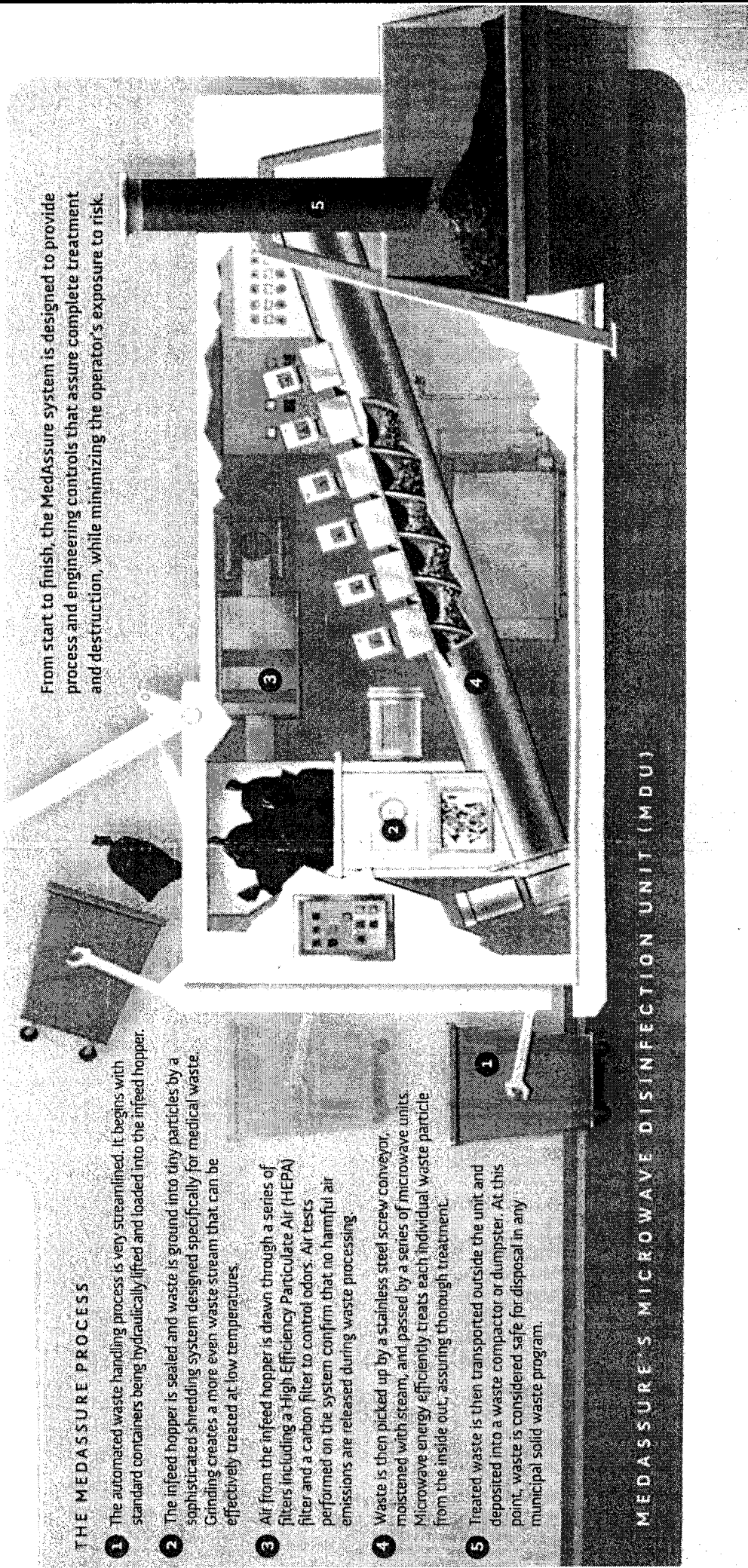
PROJECT NUMBER	
SHEET NUMBER	

DATE: 10/15/08

**THE MEDASSURE PROCESS**

- 1** The automated waste handling process is very streamlined. It begins with standard containers being hydraulically lifted and loaded into the infeed hopper.
- 2** The infeed hopper is sealed and waste is ground into tiny particles by a sophisticated shredding system designed specifically for medical waste. Grinding creates a more even waste stream that can be effectively treated at low temperatures.
- 3** Air from the infeed hopper is drawn through a series of filters including a High Efficiency Particulate Air (HEPA) filter and a carbon filter to control odors. Air tests performed on the system confirm that no harmful air emissions are released during waste processing.
- 4** Waste is then picked up by a stainless steel screw conveyor, moistened with steam, and passed by a series of microwave units. Microwave energy efficiently treats each individual waste particle from the inside out, assuring thorough treatment.
- 5** Treated waste is then transported outside the unit and deposited into a waste compactor or dumpster. At this point, waste is considered safe for disposal in any municipal solid waste program.

From start to finish, the MedAssure system is designed to provide process and engineering controls that assure complete treatment and destruction, while minimizing the operator's exposure to risk.



MEDASSURE'S MICROWAVE DISINFECTON UNIT (MDU)

APPENDIX E

RESOLUTION

September 21, 2009

WHEREAS, the County has received an application from MedAssure to include them into the Ocean County District Solid Waste Management Plan as a solid waste facility to process medical waste at Block 1160 Lot 237 at 845 Towbin Ave., Lakewood Township; and

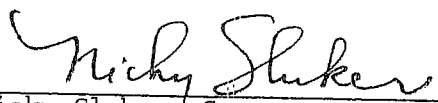
WHEREAS, the Ocean County Solid Waste Advisory Council has reviewed the application provided by MedAssure; and

WHEREAS, the applicant and their consultants made a presentation at the Ocean County Solid Waste Advisory Council meeting on September 21, 2009;

**NOW, THEREFORE BE IT RESOLVED** as follows:

1. The Ocean County Solid Waste Advisory recommends that the Board of Chosen Freeholders consider a Plan Amendment to include MedAssure into the Ocean County District Solid Waste Management Plan.

I certify that this Resolution was adopted at the September 21, 2009 SWAC Meeting.

  
\_\_\_\_\_  
Nicky Sluker, Secretary to SWAC

## APPENDIX F

### RESOLUTION

August 18, 2010

WHEREAS, the Ocean County Board of Chosen Freeholders has adopted and the Commissioner of the New Jersey Department of Environmental Protection has certified, as required by law, a Solid Waste Management Plan for the Ocean County Solid Waste District (hereinafter "District"); and

WHEREAS, the Ocean County Board of Chosen Freeholders has adopted amendments to the Solid Waste Management Plan to provide a comprehensive strategy for the management, recycling and disposal of solid waste generated within District; and

WHEREAS, MedAssure Services, LLC (hereinafter "MedAssure") submitted an application on August 12, 2009 to be recognized as a solid waste facility to process and transfer Regulated Medical Waste, as defined in N.J.A.C. 7:26-3A.6(a), at Block 1160, Lot 237, 845 Towbin Avenue, Lakewood Township (hereinafter the "Facility"); and

WHEREAS, Ocean County's Department of Solid Waste Management reviewed the application and confirms that currently there are no medical waste treatment facilities located within Ocean County; and

WHEREAS, the Ocean County Solid Waste Advisory Council recommended to the Ocean County Board of Chosen Freeholders that a draft Plan Amendment be prepared for the inclusion of the MedAssure Facility in the Ocean County District Solid Waste Management Plan in order to meet the Regulated Medical Waste disposal needs of the District and its surrounding counties ; and

WHEREAS, a draft Plan Amendment has been prepared to include the MedAssure Facility in the Ocean County District Solid Waste Management Plan as set forth above; and

WHEREAS, the draft Plan Amendment has been publicly distributed as required by law and the draft Plan Amendment was subject to public comment during a public hearing conducted by the Ocean County Board of Chosen Freeholders on August 18, 2010; and

WHEREAS, the Ocean County Board of Chosen Freeholders has carefully considered the recommendations of the County's professional staff, consultants and the Ocean

County Solid Waste Advisory Council and has further considered both oral and written comments and testimony from the public hearing; and

WHEREAS, N.J.S.A. 13:1E-20 requires County Solid Waste Management Districts to develop Solid Waste Management Plans to meet the solid waste disposal needs of the respective Districts for a ten (10) year planning period; and

WHEREAS, the Facility proposed by MedAssure would have the capacity to process and treat approximately 15,000 tons of Regulated Medical Waste per year, which is far in excess of that necessary to service the disposal needs of the Regulated Medical Waste generators of District and its surrounding counties; and

WHEREAS, one of the long term objectives of the Ocean County District Solid Waste Management Plan has been to include only those solid waste facilities sized to meet the solid waste disposal needs of the District; and

WHEREAS, during the course of the August 18, 2010 public hearing, the Ocean County Board of Chosen Freeholders suggested to MedAssure that the maximum throughput capacity of its proposed Facility be reduced and restricted to 7500 tons of Regulated Medical Waste per year, which is sufficient to meet the current Regulated Medical Waste disposal needs of the Ocean County Solid Waste Management District and its surrounding counties; and

WHEREAS, MedAssure agreed to accept this restriction and limitation on the maximum annual throughput capacity of its proposed Facility; and

WHEREAS, MedAssure will have the option, in the future, to apply for an expansion of its Facility and an increase in the maximum annual throughput capacity of its Facility, in the event the medical waste disposal needs of the District demonstrate the necessity for the same; and

WHEREAS, the Ocean County Board of Chosen Freeholders wishes to approve the inclusion of the MedAssure Services LLC facility in the Ocean County Solid Waste Management Plan subject to the modifications set forth above, limiting the maximum annual throughput capacity of the MedAssure Facility to 7500 tons of Regulated Medical Waste per year.



NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF CHOSEN FREEHOLDERS OF THE COUNTY OF OCEAN, STATE OF NEW JERSEY, as follows:

1. The MedAssure Services LLC medical waste treatment and transfer Facility is hereby included in the Ocean County District Solid Waste Management Plan, subject to the provisions set forth in the attached August 18, 2010 Amendment to the Ocean County District Solid Waste Management Plan (hereinafter "August 18, 2010 Plan Amendment"), which include a restriction limiting the maximum annual throughput capacity of the Facility to 7500 tons of Regulated Medical Waste per year.
2. In accordance with the provisions of the August 18, 2010 Plan Amendment attached hereto, all Type-10 solid waste residue generated by the MedAssure Facility shall be transported to and disposed of at an approved solid waste disposal facility located outside the State of New Jersey.
3. A certified copy of this Resolution together with copies of the August 18, 2010 Plan Amendment, copies of the public hearing transcript and other pertinent documents and information shall be submitted to the Commissioner of the New Jersey Department of Environmental Protection for State certification as required by law.
4. Certified copies of this resolution shall be sent to the Ocean County Solid Waste Advisory Council, clerk of each municipality in Ocean County and other parties, as required by law.

I certify the foregoing to be a  
True copy of a Resolution *Accepted*  
By the Board of Chosen Freeholders  
of the County of Ocean on the  
*15th* day of *AUG*, 2010  
*Betty Vasil*  
Betty Vasil  
Clerk of the Board