Venice Gondolier - 11/11/05



11/11/05

Biowaste found at landfill

Four local hospitals have been fined \$2,500 each for improperly disposing of biomedical waste, a county official said.

"There have been items considered biomedical waste found at the county landfill on Knight's Trail Road,"said Sarasota County Biomedical Program Waste Coordinator Carolynn Branson. "Small quantities of items like sharps (needles) were found in clear plastic bags."

The hospitals that were fined were Sarasota Memorial Hospital, Doctor's Hospital, Venice Regional Medical Center and Englewood General Hospital, Branson said.

Branson said both used and unused needles were found. She described the quantities found as "not a great amount, a handful."

Branson said the biomedical waste also contained some tubing and catheters contaminated with blood.

She would not characterize the find as a public health threat.

Branson said the items were discovered during a routine inspection. She said biomedical waste is supposed to be discarded in red trash bags. She said the items discovered were in clear plastic bags.

"The sharps are supposed to be discarded in a special container," Branson said. "Those items are picked up by a registered, biomedical waste remover."

Branson said the problem started in September, and there were only about four occasions when the items were found.

"On Oct. 31, the county and the hospitals sat down to discuss the problem and how we should handle it," Branson said. "The hospitals

Page 1 of 2

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are taking it very seriously and we are all working toward complete compliance."

Staff Report

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Morris, John R.

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From: Sent: To: Cc: Subject: Morris, John R. Thursday, November 03, 2005 9:54 AM Duggan, Michele Pelz, Susan FW: Residual Material - Lime Holding Ponds- City of Venice



sarasotacentral1.0 05.doc Michele:

The attachment to the October e-mail message provided review comments regarding the information provided to the Solid Waste Section by Sarasota County for the use of the alum residual as alternate cover material at Sarasota Central Landfill. We had some concerns regarding the proposed stockpile location at the landfill, the laboratory analyses conducted on the alum residual and the need to dry the material that was placed below the water table. It seems likely that the County would be able to address these concerns regarding the stockpiling and use of the alum residual as cover material, but the biggest issue may be how the alum residual would be dewatered before transporting it to the landfill.

I'll look at the letter from the City of Venice and talk with Susan about it and get back with you by early next week.

John

John R. Morris, P.G., FDEP SW District Office, Solid Waste Section Telephone: 813-744-6100, ext. 336 (suncom 512-1042, ext. 336) Facsimile: 813-744-6125; E-mail: john.r.morris@dep.state.fl.us

-----Original Message-----From: Morris, John R. Sent: Wednesday, October 12, 2005 4:04 PM To: 'Lois Rose' Cc: 'Franklin Coggins'; Pelz, Susan Subject: RE: Residual Material - Lime Holding Ponds- City of Venice

Lois:

The requested comments regarding the stockpiling and use of the residual material as alternate daily cover at Sarasota Central Landfill are included in the attachment. Responses to the three questions that were included in you e-mail message dated August 15, 2005 and the Department's general concerns regarding the stockpiling and use of the residual material are provided.

Please contact me if you have questions regarding these comments.

John

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-----Original Message-----From: Morris, John R. Sent: Thursday, October 06, 2005 5:29 PM To: 'Lois Rose'; Pelz, Susan Cc: Franklin Coggins Subject: RE: Residual Material - Lime Holding Ponds- City of Venice

Today I've finished going through the submittals you sent via e-mail and have discussed the information briefly with Susan. I'll be putting some comments together for Susan to look at before we send them out to the County. I'm anticipating we will send them out during the first part of next week.

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-----Original Message-----From: Lois Rose [mailto:LEROSE@scgov.net] Sent: Wednesday, October 05, 2005 6:51 AM To: Morris, John R.; Pelz, Susan; Lois Rose Cc: Franklin Coggins Subject: Re: Residual Material - Lime Holding Ponds- City of Venice

Hi - it's been almost two months and I haven't had a response. Could you please advise as to when you will be able to respond to our questions?

>>> Lois Rose 08/15/05 9:16 AM >>> Susan and John

The County as received a inquiry from the City of Venice to utilize a residual material from their water plant lime softening operation that they have in their possession as daily cover soil at the CCSWDC. It has been estimated by the City of Venice that there will be approximately 26,000 cubic yards of residual material from two lime pond locations. The residual material does not exhibit any free liquids at the current time. This would be a one time request from the City of Venice as they do not generate residual material any longer since they have changed their water treatment process.

If the material can be mixed with conventional soil to use as daily cover, the County would request the City of Venice to haul the residual material to the CCSWDC and place the material in the area labeled on the attached map as "CSP". This location is the same area as our current stockpile location. The residual material would then be placed in alternating layers with conventional soil using a mixing ratio of 10:1 (conventional to residual) to then use as a daily cover material.

The landfill anticipates utilizing approximately 1,000 cubic yards of the residual material per week for a duration of approximately 26 weeks. The material will be hauled to the landfill commencing in December of 2005 and ending in February of 2006.

Attached are various reports that were provided to the County by the City of Venice.

The County is seeking guidance from the Department on the following:

1. Is the residual material classified as a soil that can be utilized for daily cover?

2. If the residual material is classified as a soil, what additional sampling, parameters and methods would the Department require to be analyzed for so that the County can store the material outside of the groundwater monitoring system in the location marked on the diagram labeled "CSP"?

3. What regulatory levels would the additional parameters be required to meet?

If you have any questions or need additional information, please let me know.

Lois:



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Lois Rose, Manager Sarasota County Solid Waste 8750 Bee Ridge Road Sarasota, FL 34241 941-861-1532 Office 941-650-0722 Cell 941-316-1300 Fax

CENTRAL COUNTY SOLID WASTE DISPOSAL COMPLEX (CCSWDC), SARASOTA COUNTY USE OF RESIDUAL MATERIAL FROM CITY OF VENICE FACILITY WATER PLANT AS INITIAL COVER

Questions From Lois Rose's E-Mail Message Dated August 15, 2005

1. Is the residual material classified as a soil that can be utilized for daily cover?

The residual materials generated by the lime softening process contained in the two ponds at the City of Venice water plant near the Wellfield Recreation Area as described by the provided reports prepared by PSI would <u>not</u> be considered to be soil. However, the County may be able to demonstrate that the residual material meets the definition of initial cover presented in Rule 62-701.200(59), F.A.C.:

(59) "Initial cover" means a 6-inch layer of compacted earth, used to cover an area of solid waste before placement of additional waste, intermediate cover, or final cover. The term also includes other material or thickness, approved by the Department, that minimizes disease vector breeding, animal attraction, and moisture infiltration, minimizes fire potential, prevents blowing litter, controls odors, and improves landfill appearance.

Please refer to Specific Condition Nos. C.10.a.(1) and C.10.c., of permit #130542-002-SO regarding the approval required for authorization to use an additional alternate initial cover material at CCSWDC.

2. If the residual material is classified as a soil, what additional sampling, parameters and methods would the Department require to be analyzed for so that the County can store the material outside of the groundwater monitoring system in the location marked on the diagram labeled "CSP"?

Stockpiling the residual material at the CCSWDC outside the area covered by the ground water monitoring system (at the "CSP" area shown on the site map that was provided) presents some risks to the County. Stockpiling the residual materials on the ground provides potential releases to the environment, which may result in impacts to soil and ground water. Potential impacts to soils would need to be characterized by soil sampling conducted prior to and following the handling of the residual material at the CCSWDC. The characterization of potential impacts to ground water may be required based on the results of the soil sampling.

Alternatives to stockpiling and handling the residual materials on the ground at the "CSP" area that will minimize potential impacts to the environment include:

- Restricting the residual material stockpiling and handling to inactive areas within Cells 1 through 4; runoff from stockpiled residual material would need to be handled as leachate and would not be allowed to discharge to the stormwater system
- Restricting the residual material stockpiling and handling to areas within the leachate collection system at the C&D materials recovery facility
- Restricting quantities accepted to the amounts needed on a daily basis, avoiding storage of the material

3. What regulatory levels would the additional parameters be required to meet?

The soil cleanup target levels (SCTLs) presented in Table II of Chapter 62-777, F.A.C. (effective date April 2005) would apply if the residual material is stockpiled and handled on the ground outside the existing monitoring network. Specifically, the "commercial/industrial" and "leachability based on ground water criteria" SCTLs presented in Table II would apply. Please note that for the metals that do not have leachability SCTLs (e.g., lead), leachability values may be derived using the Synthetic Precipitation Leaching Procedure (SPLP) and comparing the results to ground water standards.

General Comments

- Analytical results for the March 2004 sampling event include elevated MDLs for many parameters that do not demonstrate compliance with the applicable SCTLs.
- Analytical results for the March 2004 sampling event do not provide SPLP analyses for aluminum, arsenic or lead to characterize the potential for these metals to leach from the residual material.
- Dieldrin was reported at a concentration that exceeded the leachability SCTL for sample B-3, south pond.
- No evaluation was provided to demonstrate that a statistically significant number of samples were collected from the north and south ponds to adequately characterize the variability of the analytical results.
- The residual material would need to be sufficiently dry to pass the paint filter test before being transported to CCSWDC (no free liquids); in the event that the residual material is dewatered in situ, the dewatering discharge may need to be permitted by the Department's Industrial Wastewater section.



"City on the Gulf"

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UTILITIES DEPARTMENT - ADMINISTRATION OFFICE 401 West Venice Ave., Venice, Florida 34285 (941) 486-2083 Fax (941) 486-2084 Suncom: (941) 516-4367

October 20, 2005 SOUTHWEST DISTRICT

Michele Duggan, MA, MPH Environmental Specialist Domestic Wastewater Section Department of Environmental Protection strict Man t Palm Drive

3619

gan:

1d Project Resubmittal & Request for Extension File No. 03-0779 y ID No. FL0041441

hoposu-Parase let Knows -

are, on March 15, 2005 the city received FDEP approval of the proposed , in accordance with paragraph 17 of the Consent Order. Specifically, this ed of the relocation of approximately 25,000 cubic yards of lime material o be used as fill material.

Since FDEP approval of this project, we have obtained quotes to haul this material, developed a draft agreement, and negotiated with the Venice Memorial Gardens Cemetery staff. The cost of hauling 25,000 cubic yards of lime material was estimated at a project cost of \$107,500, as indicated in the city's proposed in-kind project report. During geotechnical evaluation and review of site conditions, the cemetery expected the city to "dilute" the lime material with clean fill to offset the poor structural qualities of the lime material. Based on the geotechnical recommendations, which were a minimum of a 5:1 ratio, this equates to approximately 125,000 cubic yards of clean fill for blending purposes. Even if this fill material was readily available to the city at no cost and based on similar hauling costs as quoted, this equates to about \$650,000 in additional clean fill. If the costs were split between the cemetery and the city, this does not appear cost-effective for either party. *Therefore, the city was unable to reach agreement with the cemetery staff to complete the in-kind project as originally proposed to the FDEP*.





Michele Duggan In Kind Project Proposal 3 Page 2 of 2

Please accept this letter as a request to modify our in-kind project proposal to haul the lime material to the Sarasota County Landfill on Knight's Trail instead of to the cemetery. Due to the location, the hauling costs would be very similar to those proposed in the original in-kind project. On July 22, 2005, we met Mr. Frank Coggins, Sarasota County's Solid Waste Operations Manager, at the lime material storage area. He believed it would be feasible to mix the material with his already on-site soil material for daily caps of the landfill. Later that afternoon we provided Sarasota County with the comprehensive material and structural analyses that had been performed on the lime material.

Due to the delays in finalizing the terms and conditions with the cemetery, the city respectfully requests an extension of the in-kind project completion deadline, originally set for March 16, 2006. If the Department approves the modification of the scope of the in-kind project, please consider a deadline extension of nine (9) months to meet these newly outlined and approved project requirements.

The city is looking forward to completing all aspects of the Consent Order requirements and meeting all deadlines as outlined by the Department. However, we request the consideration of this additional time for

Please let me know if you have any questions concerning this information and the attached supporting documentation. I may be reached at (941) 480-3333 x 224 or via email at csharek@ci.venice.fl.us.

Sincerely

R. Christopher Sharek, P.E. Utilities Manager

Cc: Martin Black, AICP, City Manager Gerald Boyce, OMI Facilities Manager

Morris, John R.

From: Sent: To: Cc: Subject: Morris, John R. Wednesday, October 12, 2005 4:04 PM 'Lois Rose' 'Franklin Coggins'; Pelz, Susan RE: Residual Material - Lime Holding Ponds- City of Venice



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Smith At Central permit file

Jeb Bush Governor Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619

Colleen M. Castille Secretary

OCT -4 2005

Sarasota Co. Office of Management and Budget C/o Paul Wingler, Project Manager 4000 Knights Trail Road Nokomis, FL 34275

Re: Issuance of Standard General Permit File No.: 58-0246654-001 Sarasota County

Dear Mr. Wingler:

Enclosed is Environmental Resource Permit, File No. 58-0246654-001 issued pursuant to Part IV of Chapter 373, Florida Statute and Chapter 40D-4, Florida Administrative Code.

Appeal rights for you as the permittee, the agent authorized to secure the permit, and for any affected third party are described in the text of the permit, along with conditions which must be met when permitted activities are undertaken. You, as the applicant, are responsible for all aspects of the permit compliance. You should, therefore, review this permit document carefully to ensure compliance with the twenty-five (25) general conditions and twenty-four (24) specific conditions contained therein.

Thank you for your interest in the permit process and in managing the natural resources of the state of Florida. If you have any questions, please contact me at (813) 744-6100, extension 393. When referring to this project, please use the file number indicated.

Sincerely,

-Jas Hymon

R. Douglas Hyman, P.E. Stormwater Engineer Industrial Wastewater

enclosure

"More Protection, Less Process"

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jeb Bush Governor Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619

Colleen M. Castille Secretary

SUBMERGED LANDS AND ENVIRONMENTAL RESOURCES <u>FINAL PERMIT</u> ENVIRONMENTAL RESOURCE STANDARD GENERAL PERMIT

PERMITTEE/AUTHORIZED ENTITY:

Sarasota Co. Office of Management and Budget C/o Paul Wingler, Project Manager 4000 Knights Trail Rd. Nokomis, FL 34275 Permit/Authorization Number: 58-0246654-001

Date of Issue: OCT 04 2005

Expiration Date of Construction Phase: OCT 04 2010 County: Sarasota

Project: Surface Water Management System for Central County Landfill – Citizen's Convenience Center.

This permit is issued under the authority of Part IV of Chapter 373, F.S., 40D-4, and Title 62, Florida Administrative Code (F.A.C.). The activity is not exempt from the requirement to obtain an environmental resource permit. Pursuant to Operating Agreements executed between the Department and the water management districts, as referenced in Chapter 62-113, F.A.C., the Department is responsible for reviewing and taking final agency action on this activity.

This permit also constitutes certification compliance with water quality standards under Section 404 of the Clean Water Act, 33 U.S.C. 1344.

As staff to the Board of Trustees, the Department has reviewed the activity described below, and has determined the activity is not on state-owned submerged lands. Therefore, your project is exempt from the further requirements of Chapter 253, Florida Statutes.

A copy of this authorization also has been sent to the U.S. Army Corps of Engineers (USACOE) for review. The USACOE may require a separate permit. Failure to obtain this authorization prior to construction could subject you to enforcement action by that agency. You are hereby advised that authorizations also may be required by other federal, state, and local entities. This authorization does not relieve you from the requirements to obtain all other required permits and authorizations.

"More Protection, Less Process"

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The above named permittee is hereby authorized to construct the work shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof. This permit is subject to the limits, conditions, and locations of work shown in the attached drawings, and is also subject to the attached General Conditions and Specific Conditions, which are a binding part of this permit. You are advised to read and understand these drawings and conditions prior to commencing the authorized activities, and to ensure the work is conducted in conformance with all the terms, conditions, and drawings. If you are utilizing a contractor, the contractor also should read and understand these drawings and conditions prior to commencing the authorized activities. Failure to comply with all drawings and conditions shall constitute grounds for revocation of the permit and appropriate enforcement action.

Operation of the facility is not authorized except when determined to be in conformance with all applicable rules and with the general and specific conditions of this permit/certification/authorization, as specifically described below.

ACTIVITY DESCRIPTION:

The project consists of the construction of a surface water management system to serve a Citizen's Convenience Center at the Central County Landfill. Solid waste shall be deposited by the public in 20-yard roll-off containers that will be emptied at minimum, at the end of each day. The containers will be permanently covered with fixed roofs. The 40' x 50' electronics concrete pad shall be permanently covered with a fixed roof as well. Household chemicals will be stored in manufactured storage units on a 30' x 50' concrete pad with complete containment. The hazmat vault, existing waste oil area and waste oil pads shall be hydraulically isolated from the SWMS, as well.

The proposed system consists of a 0.122-ac. dry detention system, which shall receive runoff from approximately 0.71 acres of project area. The system is designed to treat in excess of the first inch of runoff from the project area and provide attenuation for the 100-year, 24-hour design storm event.

No impacts to wetlands or other surface waters are proposed or authorized.

No activity will take place within the 100-year flood plain.

The facility is as shown on the full-sized set of drawings (Sheets 4-7) entitled "Central County Landfill – Citizen's Convenience Center", prepared by PBS&J, Inc., received at the Department on July 6, 2005.

The project is located at the central county landfill at 4000 Knights Trail Road in Section 10, Township 38, Range 19, Sarasota County, FL.

GENERAL/LIMITING CONDITIONS:

- 1. All activities shall be implemented as set forth in the plans, specifications and performance criteria as approved by this permit. Any deviation from the permitted activity and the conditions for undertaking that activity shall constitute a violation of this permit.
- 2. This permit or a copy thereof, complete with all conditions, attachments, exhibits, and modifications, shall be kept at the work site of the permitted activity. The complete permit shall be available for review at the work site upon request by Department staff. The permittee shall require

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 2 of 1 the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

Activities approved by this permit shall be conducted in a manner, which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

Water quality data for the water discharged from the permittee's property or into the surface waters of the state shall be submitted to the Department as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume discharged from the property or into surface waters of the state.

5. Department staff must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in offsite discharge or sediment transport into wetlands or surface waters, a written dewatering plan must either have been submitted and approved with the permit application or submitted to the Department as a permit prior to the dewatering event as a permit modification. The permittee is advised that the rules of the Southwest Florida Water Management District state that a water use permit may be required prior to any use exceeding the thresholds in Chapter 40D-2, F.A.C.

6. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

7. Off site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operation schedules satisfactory to the Department.

8. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading mulching, planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.

Central County Landfill - Citizen's Convenience Center File #: 58-0246654-001 Page 3 of 1

3.

4.

the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

3. Activities approved by this permit shall be conducted in a manner, which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

4. Water quality data for the water discharged from the permittee's property or into the surface waters of the state shall be submitted to the Department as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume discharged from the property or into surface waters of the state.

5. Department staff must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in offsite discharge or sediment transport into wetlands or surface waters, a written dewatering plan must either have been submitted and approved with the permit application or submitted to the Department as a permit prior to the dewatering event as a permit modification. The permittee is advised that the rules of the Southwest Florida Water Management District state that a water use permit may be required prior to any use exceeding the thresholds in Chapter 40D-2, F.A.C.

Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

7. Off site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operation schedules satisfactory to the Department.

8. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading mulching, planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 4 of 15-

6.

the contractor to review the complete permit prior to commencement of the activity authorized by this permit.

3. Activities approved by this permit shall be conducted in a manner, which does not cause violations of state water quality standards. The permittee shall implement best management practices for erosion and a pollution control to prevent violation of state water quality standards. Temporary erosion control shall be implemented prior to and during construction and permanent control measures shall be completed within 7 days of any construction activity. Turbidity barriers shall be installed and maintained at all locations where the possibility of transferring suspended solids into the receiving waterbody exists due to the permitted work. Turbidity barriers shall remain in place at all locations until construction is completed and soils are stabilized and vegetation has been established. Thereafter the permittee shall be responsible for the removal of the barriers. The permittee shall correct any erosion or shoaling that causes adverse impacts to the water resources.

4. Water quality data for the water discharged from the permittee's property or into the surface waters of the state shall be submitted to the Department as required by the permit. Analyses shall be performed according to procedures outlined in the current edition of Standard Methods for the Examination of Water and Wastewater by the American Public Health Association or Methods for Chemical Analyses of Water and Wastes by the U.S. Environmental Protection Agency. If water quality data are required, the permittee shall provide data as required on volumes of water discharged, including total volume discharged during the days of sampling and total monthly volume discharged from the property or into surface waters of the state.

5. Department staff must be notified in advance of any proposed construction dewatering. If the dewatering activity is likely to result in offsite discharge or sediment transport into wetlands or surface waters, a written dewatering plan must either have been submitted and approved with the permit application or submitted to the Department as a permit prior to the dewatering event as a permit modification. The permittee is advised that the rules of the Southwest Florida Water Management District state that a water use permit may be required prior to any use exceeding the thresholds in Chapter 40D-2, F.A.C.

6. Stabilization measures shall be initiated for erosion and sediment control on disturbed areas as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased, but in no case more than 7 days after the construction activity in that portion of the site has temporarily or permanently ceased.

- 7. Off site discharges during construction and development shall be made only through the facilities authorized by this permit. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream stages. Stages may be subject to operation schedules satisfactory to the Department.
- 8. The permittee shall complete construction of all aspects of the surface water management system, including wetland compensation (grading mulching, planting), water quality treatment features, and discharge control facilities prior to beneficial occupancy or use of the development being served by this system.

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 5 of **#i**5-

- The following shall be properly abandoned and/or removed in accordance with the applicable regulations:
 - a. Any existing wells in the path of construction shall be properly plugged and abandoned by a licensed well contractor.
 - b. Any existing septic tanks on site shall be abandoned at the beginning of construction.
 - c. Any existing fuel storage tanks and fuel pumps shall be removed at the beginning of construction.
- 10. All surface water management systems shall be operated to conserve water in order to maintain environmental quality and resource protection; to increase the efficiency of transport, application and use; to decrease waste; to minimize unnatural runoff from the property and to minimize dewatering of offsite property.
- 11. At least 48 hours prior to commencement of activity authorized by this permit, the permittee shall submit to the Department a written notification of commencement using an "Environmental Resource Permit Construction Commencement" notice (Form No. 62-343.900(3), F.A.C.) indicating the actual start date and the expected completion date.
- 12. Each phase or independent portion of the permitted system must be completed in accordance with the permitted plans and permit conditions prior to the occupation of the site or operation of site infrastructure located within the area served by that portion or phase of the system. Each phase or independent portion of the system must be completed in accordance with the permitted plans and permit conditions prior to transfer of responsibility for operation and maintenance of that phase or portion of the system to a local government or other responsible entity.
- 13. Within 30 days after completion of construction of the permitted activity, the permittee shall submit a written statement of completion and certification by a registered professional engineer or other appropriate individual as authorized by law, utilizing the required "Environmental Resource Permit As-Built Certification by a Registered Professional" (Form No. 62-343.900(5), F.A.C.), and "Request for Transfer of Environmental Resource Permit Construction Phase to Operation Phase" (Form 62-343-900(7), F.A.C.). Additionally, if deviation from the approved drawings is discovered during the certification process a copy of the approved permit drawings must accompany the certification with deviations noted.
- 14. This permit is valid only for the specific processes, operations and designs indicated on the approved drawings or exhibits submitted in support of the permit application. Any substantial deviation from the approved drawings, exhibits, specifications or permit conditions, including construction within the total land area but outside the approved project area(s), may constitute grounds for revocation or enforcement action by the Department, unless a modification has been applied for and approved. Examples of substantial deviations include excavation of ponds, ditches or sump areas deeper than shown on the approved plans.
- 15. The operation phase of this permit shall not become effective until the permittee has complied with the requirements of the conditions herein, the Department determines the system to be in compliance with the permitted plans, and the entity approved by the Department accepts responsibility for operation and maintenance of the system. The permit may not be transferred to the operation and maintenance entity approved by the Department until the operation phase of the permit becomes

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 6 of 🗰 15-

9.

effective. Following inspection and approval of the permitted system by the Department, the permittee shall request transfer of the permit to the responsible operation and maintenance entity approved by the Department, if different from the permittee. Until a transfer is approved by the Department pursuant to Section 62-343.110(1)(d), F.A.C., the permittee shall be liable for compliance with the terms of the permit.

- 16. Should any other regulatory agency require changes to the permitted system, the Department shall be notified of the changes prior to implementation so that a determination can be made whether a permit modification is required.
- 17. This permit does not eliminate the necessity to obtain any required federal, state, local and special district authorizations including a determination of the proposed activities' compliance with the applicable comprehensive plan prior to the start of any activity approved by this permit.
- 18. This permit does not convey to the permittee or create in the permittee any property right, or any interest in real property, nor does it authorize any entrance upon or activities on property which is not owned or controlled by the permittee, or convey any rights or privileges other than those specified in the permit and Chapter 40D-4 or Chapter 40D-40, F.A.C.
- 19. The permittee is hereby advised that Section 253.77, F.S., states that a person may not commence any excavation, construction, other activity involving the use of sovereign or other lands of the state, the title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund without obtaining the required lease, license, easement, or other form of consent authorizing the proposed use. Therefore, the permittee is responsible for obtaining any necessary authorizations from the Board of Trustees prior to commencing activity on sovereignty lands or other state-owned lands.
- 20. The permittee shall hold and save the Department harmless from any and all damages, claims, or liabilities which may arise by reason of the activities authorized by the permit or any use of the permitted system.
- 21. Any delineation of the extent of a wetland or other surface water submitted as part of the permit application, including plans or other supporting documentation, shall not be considered binding unless a specific condition of this permit or a formal determination under section 373.421(2), F.S., provides otherwise.
- 22. The permittee shall notify the Department in writing within 30 days of any sale, conveyance, or other transfer of ownership or control of the permitted system or the real property at which the permitted system is located. All transfers of ownership or transfers of a permit are subject to the requirements of section 62-343.130, F.A.C. The permittee transferring the permit shall remain liable for any corrective actions that may be required as a result of any permit violations prior to such sale, conveyance or other transfer.
- 23. Upon reasonable notice to the permittee, Department authorized staff with proper identification shall have permission to enter, inspect, sample and test the system to insure conformity with Department rules, regulations and conditions of the permits.

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 7 of the convenience Center





- 24. If historical or archaeological artifacts are discovered at any time on the project site, the permittee shall immediately notify the Department and the Florida Department of State, Division of Historical Resources.
- 25. The permittee shall immediately notify the Department in writing of any previously submitted information that is later discovered to be inaccurate.

SPECIFIC CONDITIONS:

1. All submittals required herein shall be directed to:

Department of Environmental Protection Environmental Administrator Submerged Lands & Environmental Resources Southwest District 3804 Coconut Palm Dr. Tampa, FL 33619

hereafter referred to as "the Department". Such submittals include, but are not limited to, record drawings, progress reports, mitigation monitoring reports and water quality monitoring reports.

All submittals shall include the permittee's name and permit number.

- 2. The permittee shall be aware of and operate under #1 through #25 of the attached "General/Limiting Conditions for Environmental Standard General and Individual Permits". General/Limiting Permit Conditions are binding upon the permittee and enforceable pursuant to Chapter 403 of the Florida Statutes.
- 3. If the approved permit, drawings and the Specific Conditions contradict each other, then the Specific Conditions shall prevail.
- 4. In the event that the permittee files for bankruptcy prior to completion of all work permitted and required by this permit, the permittee must notify the Department within 30 days of filing. The notification shall identify the bankruptcy court and case number and shall include a copy of the bankruptcy petition.
- 5. The permittee is hereby advised that Florida law states: "No person shall commence any excavation, construction, or other activity involving the use of sovereign or other lands of the state, title to which is vested in the Board of Trustees of the Internal Improvement Trust Fund or the Department of Environmental Protection under Chapter 253, until such person has received from the Board of Trustees of the Internal Improvement Trust Fund the required lease, license, easement, or other form of consent authorizing the proposed use." Pursuant to Rule 18-14.002(1), Florida Administrative Code, if such work is done without consent, or if a person otherwise damages state land or products of state land, the Board of Trustees may levy administrative fines of up to \$10,000 per offense.

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 8 of **#** /5



- 7. The permittee is responsible for retaining a professional engineer registered in the State of Florida to certify that the construction of the project is in compliance with the approved permit plans.
- 8. The permittee shall notify the Department in writing within 14 days of any change in agents designated in the approved permit application.
- 9. Subsequent to the selection of the contractor to perform the authorized activity and prior to the initiation of work authorized by this permit, the permittee, (or authorized agent) and the contractor, shall attend a pre-construction conference with a representative of the Department's Submerged Lands and Environmental Resources staff. The permittee shall notify the Department in writing subsequent to contractor selection to request scheduling of the subject conference.
- 10. Progress reports for the project shall be submitted to the Department beginning October 1, 2005 and shall continue to be submitted every six (6) months and shall be submitted until all permitted construction of the project is completed. Progress reports must be submitted to the Department even if there is no ongoing construction. Reports shall include the current project status and the construction schedule for the following six (6) month period.

The report shall include the following information:

- a. Date permitted activity was begun; if work has not begun on-site, please indicate.
- b. Brief description and extent of the work (i.e., dredge, fill, monitoring, mitigation, management, maintenance) completed since the previous report or since the permit was issued. Show on copies of the permit drawings those areas where work has been completed.
- c. Brief description and extent of the work (i.e. dredge, fill, monitoring, mitigation, management, maintenance) anticipated in the next six months. Indicate on copies of the permit drawings those areas where it is anticipated that work will be done.
- d. This report shall include on the first page, just below the title, the certification of the following statement by the individual who supervised preparation of the report: "This report represents a true and accurate description of the activities conducted during the six months period covered by this report."
- 11. All drawings, record drawings, land surveys and as-built surveys required herein shall be certified by a Professional Engineer or Registered Land Surveyor, as appropriate, registered in the State of Florida.
- 12. The permittee shall submit two copies of signed, dated and sealed as-built drawings to the Department for Department review and approval within 30 days of completion of construction. The as-built drawings shall be based on the Department permitted construction drawings, which should be revised to reflect changes made during construction. Both the original design and constructed elevation must be clearly shown. The plans must be clearly labeled as "as-built" or "record" drawings. Surveyed dimensions and elevations required shall be verified and signed, dated and sealed by a Florida registered surveyor or engineer. Record drawings shall include the invert elevations of all culverts and controlling elevations of all permitted structures as shown in the permitted drawings. As-builts shall be submitted to the Department regardless of whether or not

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 9 of **34** /5





deviations are present. In addition to the "As-built Certification" form, the permittee shall submit the "Request for Transfer of Environmental Resource Permit Construction Phase to Operation Phase" as required in General Condition #13.

The following information shall be verified on the as-built drawings:

From the engineered, signed and sealed 12" x 24" drawings: Charles P. Pulman, P.E., #35217 May 28, 2005 & June 30, 2005

Plan View/Cross-Section	Sheet/ Page Number
Site Plan (May 28, 2005)	Sheet 4
Grading Plan	Sheet 5
Flume & Skimmer Detail	Sheet 6
Swale & Retention Pond	Sheet 7
Cross-section E.W., A-A & B-B	

- 13. Best management practices for erosion control shall be implemented prior to construction and maintained at all times during construction to prevent siltation and turbid discharges in excess of State water quality standards pursuant to Rule 62-302, F.A.C. Methods shall include, but are not limited to the use of staked hay bales, staked filter cloth, sodding, seeding, and mulching; staged construction; and the installation of turbidity screens around the immediate project site. Erosion control methods shall be implemented prior to construction as described on Sheets 2, 5 & 6 of PBS&J, Inc. No.:120521.330101, and incorporated herein.
- 14. The permittee shall be responsible for insuring erosion control devices/procedures are inspected and maintained daily during all phases of construction authorized by this permit until areas disturbed during construction are sufficiently stabilized to prevent erosion, siltation, and turbid discharges.
- 15. Grass seed, mulch, or sod shall be installed and maintained on exposed slopes and disturbed soil areas within 48 hours of completing final grade, and at other times as necessary, to prevent erosion, sedimentation or turbid discharges into waters of the state and/or adjacent wetlands. A vegetative cover that stabilizes and prevents erosion of the fill material shall be established within 60 days of sodding or seeding. Turbidity barriers/erosion control devices shall be removed upon establishment of a substantial vegetative cover.
- 16. The permittee shall notify the Department of any sinkhole development in the surface water management system within 48 hours after discovery and must submit a detailed sinkhole evaluation and repair plan for approval by the Department within 30 days of discovery.
- 17. The permitted surface water management system shall only be used for the purpose of controlling stormwater runoff from the site and shall not be used to dispose of or store any solid/liquid waste or products generated or used during operation or construction of the facility.
- 18. The permitted surface water management system shall only be used for the purpose of controlling stormwater runoff and not be used to dispose of, store, or otherwise contain any Construction and Demolition Debris material or for other operational aspects of the landfill.

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 10 of 15

- 19. The permittee shall construct the surface water management system prior to any land clearing, mining/borrow pit, or landfilling activity within the project area. During mining/borrow pit activities, the permittee shall operate and maintain the retention ponds in such a manner, which will ensure that no adverse off-site water quality impacts will occur.
- 20 The dry detention pond is intended to become dry within 72 hours after a rainfall event. A system that is regularly wet will be considered as not in compliance with this permit and possible modifications to the system may be required.
- 21. The Operation and Maintenance Entity shall submit inspection reports in the form required by the Department, FDEP Form # 62-343.900(6), *Inspection Certification*,

For swales or retention-and-percolation: 24 months after operation is authorized and every 18 months thereafter.

22. If during the progress of this project prehistoric or historic artifacts, such as pottery or ceramics, stone tools or metal implements, dugout canoes, or any other physical remains that could be associated with Native American cultures are encountered at any time within the project site area, work should cease in the immediate vicinity of such discoveries. The permittee, or other designee, should contact the Florida Department of State, Division of Historical Resources, Review and Compliance Section at 850/245-6333, or 800/847-7278, as well at the Department at 813/744-6100. Project activities should not resume without verbal and/or written authorization from the Division of Historical Resources.

In the event that any unmarked human remains are encountered anywhere on the subject property, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, *Florida Statutes*. The permittee, or other designee, should contact the authority cited in this Section. Thereafter, project activities should not resume without verbal and/or written authorization from the designated official.

- 23. The authorized stormwater management system shall be completed prior to or simultaneously with associated upland development. Occupation of the site shall be in accordance with General Condition 13.
- 24. The issuance of this Environmental Resource Permit does not constitute the review or approval of a NPDES Stormwater permit or Pollution Prevention Plan. Construction activities that disturb more than one (1) acres of land are required to obtain a NPDES permit. Permittee is advised to contact the Department's NPDES stormwater program at (850) 245-7522 prior to the commencement of any construction.

RIGHTS OF AFFECTED PARTIES

This permit is hereby granted. This action is final and effective on the date filed with the Clerk of the Department unless a sufficient petition for an administrative hearing is timely filed under sections 120.569 and 120.57 of the Florida Statutes as provided below. If a sufficient petition for an administrative hearing is timely filed, this action automatically becomes only proposed agency action on the application, subject to the result of the administrative review process. Therefore, on the filing of a timely and sufficient

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 1 of 15 petition, this action will not be final and effective until further order of the Department. Because an administrative hearing may result in the reversal or substantial modification of this action, the applicant is advised not to commence construction or other activities until the deadlines noted below for filing a petition for an administrative hearing or request for an extension of time have expired.

Mediation is not available.

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received by the clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Mediation may also be pursued as specified below.

Under rule 62-110.106(4) of the Florida Administrative Code, a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon. If a request is filed late, the Department may still grant it upon a motion by the requesting party showing that the failure to file a request for an extension of time before the deadline was the result of excusable neglect.

If a timely and sufficient petition for an administrative hearing is filed, other persons whose substantial interests will be affected by the outcome of the administrative process have the right to petition to intervene in the proceeding. Intervention will be permitted only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

In accordance with rules 28-106.111(2) and 62-110.106(3)(a)(4), petitions for an administrative hearing by the applicant must be filed within 21 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under section 120.60(3) of the Florida Statutes, must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first. Under section 120.60(3) of the Florida Statutes, however, any person who has asked the Department for notice of agency action may file a petition within 21 days of receipt of such notice, regardless of the date of publication.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition for an administrative hearing or pursue mediation as provided below within the appropriate time period shall constitute a waiver of those rights.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 11 of 14 petition, this action will not be final and effective until further order of the Department. Because an administrative hearing may result in the reversal or substantial modification of this action, the applicant is advised not to commence construction or other activities until the deadlines noted below for filing a petition for an administrative hearing or request for an extension of time have expired.

Mediation is not available.

A person whose substantial interests are affected by the Department's action may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received by the clerk) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000. Mediation may also be pursued as specified below.

Under rule 62-110.106(4) of the Florida Administrative Code, a person whose substantial interests are affected by the Department's action may also request an extension of time to file a petition for an administrative hearing. The Department may, for good cause shown, grant the request for an extension of time. Requests for extension of time must be filed with the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the applicable deadline. A timely request for extension of time shall toll the running of the time period for filing a petition until the request is acted upon. If a request is filed late, the Department may still grant it upon a motion by the requesting party showing that the failure to file a request for an extension of time before the deadline was the result of excusable neglect.

If a timely and sufficient petition for an administrative hearing is filed, other persons whose substantial interests will be affected by the outcome of the administrative process have the right to petition to intervene in the proceeding. Intervention will be permitted only at the discretion of the presiding officer upon the filing of a motion in compliance with rule 28-106.205 of the Florida Administrative Code.

In accordance with rules 28-106.111(2) and 62-110.106(3)(a)(4), petitions for an administrative hearing by the applicant must be filed within 21 days of receipt of this written notice. Petitions filed by any persons other than the applicant, and other than those entitled to written notice under section 120.60(3) of the Florida Statutes, must be filed within 21 days of publication of the notice or within 21 days of receipt of the written notice, whichever occurs first. Under section 120.60(3) of the Florida Statutes, however, any person who has asked the Department for notice of agency action may file a petition within 21 days of receipt of such notice, regardless of the date of publication.

The petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition for an administrative hearing or pursue mediation as provided below within the appropriate time period shall constitute a waiver of those rights.

A petition that disputes the material facts on which the Department's action is based must contain the following information:

- (a) The name and address of each agency affected and each agency's file or identification number, if known;
- (b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests are or will be affected by the agency determination;
- (c) A statement of when and how the petitioner received notice of the agency decision;
- (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;
- (e) A concise statement of the ultimate facts alleged, including the specific facts that the petitioner contends warrant reversal or modification of the agency's proposed action;

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 1**3** of 1**4** (g) A statement of the relief sought by the petitioner, stating precisely the action that the petitioner wishes the agency to take with respect to the agency's proposed action.

A petition that does not dispute the material facts on which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by rule 28-106.301.

Under sections 120.569(2)(c) and (d) of the Florida Statutes, a petition for administrative hearing must be dismissed by the agency if the petition does not substantially comply with the above requirements or is untimely filed.

In addition to petitioning for an administrative hearing, any person who has previously filed a petition for an administrative hearing may pursue mediation. If a written mediation agreement with all parties to the proceeding (i.e., the applicant, the Department, and any person who has filed a timely and sufficient petition for a hearing) is filed with the Department within 10 days after the deadline for filing a petition for an administrative hearing, the time limitations imposed by sections 120.569 and 120.57 shall be tolled to allow mediation to proceed. The agreement must contain all the information required by rule 28-106.404. The agreement must be received by the clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida 32399-3000, before the deadline noted above. Pursuing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement.

Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. As noted above, persons seeking to protect their substantial interests that would be affected by such a final decision modified through mediation must file their petitions within 21 days of receipt or publication of this notice as provided above, or they shall be deemed to have waived their right to a proceeding under sections 120.569 and 120.57. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under sections 120.569 and 120.57 remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action and electing remedies under those two statutes.

This permit constitutes an order of the Department. Subject to the provisions of paragraph 120.68(7)(a) of the Florida Statutes, which may require a remand for an administrative hearing, the applicant has the right to seek judicial review of the order under section 120.68 of the Florida Statutes, by the filing of a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000; and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within 30 days from the date when the order is filed with the Clerk of the Elorida Statutes, may also seek appellate review of the order before the Land and Water Adjudicatory Commission under section 373.114(1) or 373.4275 of the Florida Statutes. Requests for review before the Land and Water Adjudicatory Commission must be filed with the Clerk of the Commission and served on the Department within 20 days from the date when the Clerk of the Department.

Central County Landfill -- Citizen's Convenience Center File #: 58-0246654-001 Page 1**4** of 1**5** Executed in Tampa, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Deborah A. Getzoff District Director Southwest District

Copies furnished to:

Charles P. Putnam, P.E. c/o Bryan Zoller, P.E., PBS&J, Inc., 2803 FruitvilleRoad, Suite 130, Sarasota, FL 34237 Susan Pelz, P.E., Solid Waste Section, FDEP Tampa Jessica Kleinfelter, FDEP Tallahassee, NPDES Section

Enclosure: NPDES Stormwater Construction Activity brochure ((1) each for permittee and agent)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this permit, including all copies were mailed before the close of business on, $\sqrt{0}/04$, 2005, to the above listed persons.

FILING AND ACKNOWLEDGMENT

FILED, on this date, pursuant to 120.52(9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

n 10/04/05 Clerk Date

Reviewed by: R. Douglas Hyman and Ted Murray Prepared by: Ernestine Robinson

Attachments:

Joint ERP Application, 5 pages Erosion Control Methods, 1 page (sheet 6 of plans) Project Location Map, 1 page Grading Plan, 1 page Miscellaneous Details, 1 page Household Chemical Collection Center, 1 page Operation and Maintenance Instructions, 1 page Construction commencement notice/62-343.900(3) As-built certification/62-343.900(5) Inspection certification/62-343.900(6) Transfer construction to operation phase/62-343.900(7)

Central County Landfill – Citizen's Convenience Center File #: 58-0246654-001 Page 1460f 15 LIME SLUGGE USE FOR LF CONDE CONTRACTOR CENTRAL IF - ISSUES

(1) ANTOTTURE DATA FROM MAR ZOD'E SHOW'S ELEVITED MULLS FOR MANY PARAMETER THAT DO NOT DOMUNISTRATE COMPLICATIONE of

- the LORAMALIM SCTL
- (ANTOTTION DATIA FROM MAN 2004 DES NOT
- PROVIDE SPLP ANTRYSIS FOR ANIENIC,
- LEAD OR ALCOMONIA
- 3 DELDUN REPORTED ADAVE GW LOTUNSIUM SCTL FOR SAMPLE B-3 IN SOUTH POND

(5) USE 1,000 YO' PER WEEK FIL

DU ONTION OF - 26 WEEKS ; TO BE STACIONED IN EXOTATED SOLIS IN THEA NUTLUE GW MONITOUNE

GE ADDIDUTTELY DEWATEDED TO MEET PATNIT FILTER TEST - NOOD TO MEET OF I W SECTION ADOUT NOODTO POLMIT DEWMODUNIT DISLIMMENES

(WATER CONTENT UN CLEAR, NEEDS TO

- (B) STATISTICALLY SIGNIFICANT & OF SAMPLES FOR ~26,000 YD 3? ANY MORE NEEDED?

Morris, John R.

From: Sent: To: Cc: Subject: Lois Rose [LEROSE@scgov.net] Monday, August 15, 2005 9:17 AM Morris, John R.; Pelz, Susan Franklin Coggins Residual Material - Lime Holding Ponds- City of Venice













VOLUMECALC.pdf CCSWDCMAP.pdf

f City of Venice Transmittal.pdf... PSI2004Letter.pdf PSIINITREPORT.pd PSIPROTCORSOIL. PS f pdf

PSIREPORT.pdf



PSIREPORTcont.pd f

Susan and John

The County as received a inquiry from the City of Venice to utilize a residual material from their water plant lime softening operation that they have in their possession as daily cover soil at the CCSWDC. It has been estimated by the City of Venice that there will be approximately 26,000 cubic yards of residual material from two lime pond locations. The residual material does not exhibit any free liquids at the current time. This would be a one time request from the City of Venice as they do not generate residual material any longer since they have changed their water treatment process.

If the material can be mixed with conventional soil to use as daily cover, the County would request the City of Venice to haul the residual material to the CCSWDC and place the material in the area labeled on the attached map as "CSP". This location is the same area as our current stockpile location. The residual material would then be placed in alternating layers with conventional soil using a mixing ratio of 10:1 (conventional to residual) to then use as a daily cover material.

The landfill anticipates utilizing approximately 1,000 cubic yards of the residual material per week for a duration of approximately 26 weeks. The material will be hauled to the landfill commencing in December of 2005 and ending in February of 2006.

Attached are various reports that were provided to the County by the City of Venice.

The County is seeking guidance from the Department on the following:

1. Is the residual material classified as a soil that can be utilized for daily cover?

2. If the residual material is classified as a soil, what additional sampling, parameters and methods would the Department require to be analyzed for so that the County can store the material outside of the groundwater monitoring system in the location marked on the diagram labeled "CSP"?

3. What regulatory levels would the additional parameters be required to meet?

If you have any questions or need additional information, please let me know.

Thanks for your time ..

Lois Rose, Manager Sarasota County Solid Waste 8750 Bee Ridge Road Sarasota, FL 34241 941-861-1532 Office 941-650-0722 Cell 941-316-1300 Fax

MEMORANDUM

UTILITIES DEPARTMENT Utility Engineering Division



City on the Gulf Venice, Florida

TO: John Lane, Director of Utilities

FROM: Chris Sharek, PE, Asst. Utility Director / Engineering

DATE: May 4, 2004

SUBJECT: Lime Pond Volume Estimation

John, as you requested on 4/28/04, I have reviewed the lime pond report (PSI, 4/12/04) to evaluate the total volume of material stored at Wellfield Park.

The area of each pond was estimated using an aerial photograph and our GIS software. Based on the PSI Report, the depth of each pond was estimated from a pair of soil borings in each pond. A range of depths was reported for each pond. For the purpose of conservative calculations, a depth slightly larger than average depth was used for each pond. The results are summarized in the table below:

	North Pond	South Pond
Area, acres	1.50	1.35
Area, ft ²	65,532	58,661
Depth Range, ft	6 - 8	2.5 - 4
Depth Estimate, ft	7.5	3.5
Volume, ft ³	491,489	205,314
Volume, yd ³	18,203	7,604
Volume, acre-ft	11.28	4.71

At this point, the city is not required to remove this material due to regulatory requirements. However, if the city elected to haul this material to a landfill, based on this information, there is approximately 25,807 cubic yards on-site. As roll-off type dump truck holds about 20 cubic yards, it could take more than 1,290 trips to haul this material to the landfill. Due to the volume of material and recent escalation of gasoline prices, I see this as a cost-prohibitive solution for the city.



(2)

SDA

ADMINISTRATION DIVISION 200 North Warfield Avenue Venice, FL 34292 Phone: 941-480-3333 Fax: 941-486-2084



City of Venice **Utilities Department**

Letter of Transmittal

TO:	Frank Cog	gins, Manager Solid	Waste		
FROM:	R. Christop	oher Sharek, PE, Uti	lities Manager RCS	/ eu	
DATE:	July 22, 20	05			
RE:	Lime Pond	Material Analysis			
We are sen	ding you:			<u></u>	n a shi sha shekarararara
🗌 Сору с	of Letter	Prints	Plans	Other	r
🛛 Attach	iment(s)	Specificatio	ns		

Copies	Description
1	PSI Lime Sludge Pond Sampling and Analysis Report (dated June 22, 1995)
1	PSI Environmental Services Report for Former Lime Ponds (dated April 12, 2004)
1	Addendum to PSI Environmental Services Report for Former Lime Ponds (dated April 21, 2004)
1	Lime Pond Volume Estimation (dated May 4, 2004)
1	PSI Laboratory Residual Testing Results for Pinebrook Park Lime Holding Ponds (dated July 23, 2004)

Total Items Transmitted: 5

Remarks: Please feel free to call me if you have any questions at 480-3333 (ext. 224).



April 21, 2004

City of Venice Utilities Department 401 West Venice Avenue Venice, Florida 34285

Attn: R. Christopher Sharek, P.E. Assistant Utility Director

Re: Addendum to Environmental Services Report Former Lime Ponds Venice, Sarasota County, Florida PSI Project No. 552-4G029

Dear Mr. Sharek:

In accordance with your request, Professional Service Industries, Inc. (PSI) is submitting the attached Environmental Services Report Addendum for the above-referenced project. Included herein are minor corrections to the original report (dated April 12, 2004) and recommendations based on the conclusions presented.

Corrections

The former lime ponds are referenced throughout the report as being located within the vicinity of Pinebrook Park. According to City of Venice officials, the study area is actually located within Wellfield Park. The reader should be instructed to substitute all references to Pinebrook Park with Wellfield Park.

Recommendations

Based on the conclusions presented in the Environmental Services Report for the former lime ponds at Wellfield Park, two courses of action are presented below:

Option 1 – <u>Complete Removal of Lime Material</u>

Following additional material characterization testing and a sufficient dewatering period, the material may be excavated for disposal or beneficial reuse at an offsite facility. Excavators could be used to remove the materials, stockpile it, and load it into dump trucks for transportation off-site. Dewatering of the lime material, to allow an excavation below the water table, would require treatment prior to discharge. Disposal or reuse options would depend on coordination and approval from the regulatory agencies. Residual lime byproducts have been Former Lime Ponds PSI Project No. 552-4G029

April 21, 2004 Page 2 of 2

reused for roadway construction projects and as soil amendments. Geotechnical testing of the material would be required and should be designed based on the end user specifications. This geotechnical testing involves combining various proportions of residual lime and soil and completing a series of tests to determine strength, compressibility and permeability.

Option 2 – Leave In-Place and Cap

The material could be left in place however, at a minimum, the material should be covered with a layer of clean topsoil or fill to minimize human exposure and to promote re-vegetation of the area. The surface of the former lime ponds should be graded to prevent accumulation of stormwater within the cells. The design of any structure that may be placed adjacent to or on top of the ponds should include a thorough geotechnical evaluation and proper foundation design.

A groundwater-monitoring plan should be implemented to evaluate the potential for impact to on-site and off-site groundwater quality if the material is left in-place. A network of monitoring wells should be installed in strategic locations to evaluate target analyte concentrations and groundwater flow direction. Groundwater samples and water level measurements should be collected quarterly or semi-annually and compiled in reports for submittal to the Florida Department of Environmental Protection.

Each of these options carries a certain level of risk and responsibility that should be included in an overall cost/benefit analysis. PSI recommends completing such an analysis prior to proceeding with the implementation of either recommended course of action at these pond sites. In addition, we recommend scheduling a meeting with the Florida Department of Environmental Protection to discuss future plans at the site and the results of previous investigations.

Thank you for choosing PSI as your consultant for this important project. If you have any questions, or if PSI can be of additional service to you in the future, please contact the undersigned at (813) 886-1075.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

mill B.

Michael J. Bair Project Manager



David A. Stedie, P.G

David A. Stedje, P.G., CHMM Senior Technical Professional

3813 4845910

11/07/95

09:46





<u>LIME_SLUDGE_POND</u> SAMPLING AND ANALYSIS

WELLFIELD RECREATION AREA SITE SARASOTA COUNTY, FLORIDA

PSI PROJECT NO. 387-54013

Post-It" brand fax transmittal memo 7671 # of pages > 2,5		
TO GARY WITT-1	From CON	
co. Assor	CO. C.ROSE	
Dept.	Phone #	
Fox (407) 642 -3327	Fax#	

RECEIVED

ROAD PROGRAM MANAGEMEN (DIV.

Ci Lane 11-28

11/07/95

23813 -1845910

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09:47

June 22, 1995

Sarasota County Transportation Road Program Management Division 1301 Cattlemen Road Sarasota, Florida 34232

Attention: Gene Stokes

RE: Wellfield Recreation Area Site Lime Sludge Pond Sampling and Analysis Sarasota County, Florida PSI Project No. 387-54013

Dear Mr. Stokes:

In accordance with Work Assignment No. 95-15, PSI's Environmental office has completed the Lime Sludge Pond Sampling and Analysis for the above referenced site. Two copies of our report are being provided for your use. We have also forwarded one copy to Michelle Kasak at Dyer, Riddle & Precourt, Inc.

We appreciate the opportunity to be of service to you. Should you have any questions, please do not hesitate to contact us.

Respectfully submitted,

PSI

David A. Stedje Project Hydrogeologist

Keith L. Butts, E.I.

Project Manager

DAS/NGF/KLB/ikf

Nana G. Faulkner, P.G.⁷ Department Manager

Copies Submitted: (2) Sarasota County Transportation (1) Dyer, Riddle, Mills & Precourt, Inc. - Michelle Kasak
Ø005

Wellfield Recreation Area Sludge Pond Sumpling

09:48

3.0 ANALYTICAL RESULTS

The complete laboratory analytical results for the June 9, 1995 sampling event are included with this report. The following are brief summaries of the laboratory results from the June 9, 1995 sampling event.

• pH -	The sample from the North Pond indicated a pri of 9.12.			
	sample from the South Pond indicated a pH of 9.22.			
		ар Х . С		
• Total Solids -	The sample from the North Pond was 37% solids. The			

- sample from the South Pond was 36% solids.
- Total Nitrogen Total Nitrogen of the North Pond sample was 173 mg/kg and 86 mg/kg for the South Pond sample.
- Total Phosphorus Total Phosphorus of the North Pond sample was 70.3 mg/kg and 43.1 mg/kg for the South Pond sample.
- EPA Method 8020 The Volatile Organic analysis results for both the North and South Pond samples were below detection limits for all parameters.
- EPA Method 8260 The Purgeable Aromatic analysis results for both the North and South Pond samples were below detection limits for all parameters:
- TCLP List The TCLP Full list parameters were below detection limits for both the North and South pond samples with the exception of Barium which was tested at concentrations of 26 mg/l and 35 mg/l, respectively.



09:49

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Wellfield Recreation Area Sludge Pond Sampling

4.0 CONCLUSIONS

The results of the laboratory analytical tests on the grab samples collected from the North and South Ponds at the Wellfield Recreation Area Site indicate the samples were below detection limits for all parameters specified in EPA Method 8020, EPA Method 8260 and the TCLP List with the exception of TCLP Barium. The concentration of Barium in both samples was below the maximum allowable "clean soil" concentration specified in Chapter 62-775, FAC (100 mg/l). Based upon the laboratory results at the tested locations the sludge deposits are considered a non-hazardous waste. In order, to fully determine the suitability of the sludge deposits for land application at an agricultural site additional tests are necessary. The results of the land application suitability tests are forthcoming.

b: Ireports SIIshidge. doc





11/07/95 09:50

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SITE	E L(CATI	ON: I	Wellfie	ld Recreation Are	a - Lime Sluc	lge Po	nds	
PROJE	ICT N	0: <u>552-5</u>	[]]2		BORING NO:	North Pond	PAGE	1	OF 1
DATE	BEGA	N: <u>6-09-</u>	95	· · · · ·	DATE FINISHED:	6-09-95	GEOL	OGIST	: Dovid Stedje
DRILL	ER:].6.	· ·*	· · · · ·	SECTION	-9	CHECK	ED B)	(: <u>Drs</u>
GROUN	ND SL	RFACE	ELEV.:	17'	TOWNSHIP:	<u>39, S</u>	GWL	DEPTI	
DRIL	ING	METHOD	: Hond A	uger	RANGE	19 E	DRILL	EWI	: Stainless Steel Auger
CONTI	RACTO)R: <u>PSI</u>			- · · · · · · · · · · · · · · · · · · ·	t and the form	GWL-DATE		E:
UATER TABLE	OEPTH IFT1	SAPPLE Type AND NO.	asth (N)	P R O F T	DESCRIPTION		VOLATI ORGANI VAPOI (ppm)	ILE HOR IC BOR RS SUR) SCR	HELL CONSTRUCTION ITTOR HELL NO.: ICHOLE DIAVETER: VALE CASDIG: VEN LENGTH: N TUPE:
						· · · · · · · · · · · · · · · · · · ·	FIDP	IDE	P DICH HWHOLE COMIR
	10 -				SLUDÆ: Ton to yellow, soft, standing water at surface.	slightly cloyey;	No Odor		
35 10	-5.00 *			• •	TERMINATION OF BORING.				1997 - Contra Contra Contra Contra Contra Contra Contra
*. *.						۰۰ ۱۹ ۱۹ ۱۹ ۱۹ ۱۹ ۱۹ ۱۹ ۱۹ ۱۹ ۱۹ ۱۹ ۱۹ ۱۹		ж - 29 ⁷	

11/07/95 09:50 3813 4845910 CITY OF VENICE 1000 SITE LOCATION: Wellfield Recreation Area - Lime Sludge Ponds PROJECT NO: 552-51332 BORING NO: South Pond PAGE OF 1 1 DATE BEGAN: 6-09-95 GEOLOGIST: DATE FINISHED: 6-09-95 SECTION: 9 DRILLER: D.G. CHECKED BY: DAS GROUND SURFACE ELEV .: 17' TOWNSHIP: 39 S GWL DEPTH: DRILLING METHOD: Hand Auger RANGE: 19 E DRILL EOUIP: Stainless Steel Auger CONTRACTOR: PSI GHL-DATE/TIME: VOLATILE HUNITOR WILL NO. p R ORGANIC HATER DEPTH SAMPLE TABLE (FT) AND NO. BURDIDLE MANETER: 0 VAPORS SURFACE CASING: ASTH DESCRIPTION F (N) (ppn) SCREEN LENGTH: T SEAL TIPE: FID PIO DEVILOPMENT TIME: 0.00 SLUDE: Ton to yellow, soft, slightly cloyey; stonding water ot surface. Na Odor TERHINATION OF BORING. -5.00 -10.00

Environmental Geotechnical Construction Consulting . Engineering . Testing ANALYTICAL REPORT Pinebrook Road-Sludge Ponds **PROJECT:** TESTED FOR: PSI, Inc. 552-PN 9142 Clearwater Environmental 4400-140th Avenue North Sulte 100 Clearwater, FL 34622 SAMPLE DATE: June 9, 1995 ATTENTION: Dave Stedje (8131 538-2300 OUR REPORT NUMBER: 385-5P051-0091 June 18, 1995 DATE:

Attached, please find our analytical report for samples described on the Chain-of-Custody (C-O-C). Please note that our laboratory has assigned unique sample numbers to each of your samples as shown on the attached C-O-C. Please reference our report number and direct any questions on this report to the individual designated below or to one of our Customer Service Representatives.

Reviewed By,

the

Anthony R. Febbraro, Department Manager

Respectfully submitted, · Professional Service Industries, Inc.

HRS #84218 HRS #E84398

cc: Kathleen Theisen /bb Ø010

09:51

PSI/Clearwater 385-5P051-0091 Page 2 of 15

LAB #: 06092-01 C

TCLP: \$W846 1311 / VOLATILES

Matrix: Soil

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Client ID:	North	Pond
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Analyte	Results	Units	Method	MDL/DF	بر بر ۱۰۰۰ ۱۰۰ ۱۰۰ ۱۰
Vinyl Chloride 1,1-Dichloroethene 2-Butanone Chloroform 1,2-Dichloroethane Carbon tetrachloride Benzene Trichloroethene Tetrachloroethene Chlorobenzene 1,4-Dichlorobenzene	< 0.05 < 0.025 < 0.05 < 0.025 < 0.025	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l	SW 8240 SW 8240	0.01/5 0.005/5 0.01/5 0.005/5 0.005/5 0.005/5 0.005/5 0.005/5 0.005/5 0.005/5	Extraction Date: 06/14/55 Analysis Date: 06/15/95 Analyst: JM

TCLP: SW846 1311 / SEMI-VOLATILES

Analyte		Results	Units	Method	MDL/DF
		< 0.05	ma/l	SW 8270	0.01/5
Pyridine	and the second secon	<0.05 <0.05	ma/l	SW 8270	0.01/5
1,4-Dichlorobenz	ene	<0.05	mg/l	SW 8270	0.01/5
2-Methylphenol	- 01	< 0.05	mg/l	SW 8270	0.01/5
3 & 4-Methylphe		<0.05	mg/l	SW 8270	0.01/5
Hexachioroeulan	,	<0.05	mg/i	SW 8270	0.01/5
Nitropenzene	lonn	< 0.05	mg/l	SW 8270	0,01/5
Hexachiorobulao	ierre	< 0.05	mg/l	SW 8270	0.01/5
2,4,5-Tricmoropi		< 0.05	mg/l	SW 8270	0.01/5
Z,4,6- Inchiolopi		<0.05	mg/l	SW 8270	0.01/5
2,4-Dinitrotoluei		<0.05	mg/l	SW 8270	0.01/5
Hexachiorobenze	al	<0.05	mg/l	SW 8270	0.01/5
A A'-D D T	v	<0.05	mg/l	SW 8270	0.01/5
4.97 -0.0.1		•		• * · · · · · · · · · · · · · · · · · ·	

TCLP: SW 1311 / ORGANOCHLORINE PESTICIDES

Analyte	Results	Units	Method	MDL/DE	
G-BHC Heptachlor Heptachlor epoxide Endrin Methoxychlor Chlordane Toxophone	<0.0025 <0.0025 <0.0025 <0.0025 <0.0025 <0.0025 <0.0025	mg/l mg/l mg/l mg/l mg/l mg/l	SW 8080 SW 8080 SW 8080 SW 8080 SW 8080 SW 8080 SW 8080 SW 8080	0.0005/5 0.0005/5 0.0005/5 0.0005/5 0.0005/5 0.0005/5 0.0005/5	Extraction Date: 06/15/95 Analysis Date: 06/15/95 Analyst: S/

TCLP: SW846 1311 / CHLORINATED HERBICIDES

Analyte	Results	Units	Method	MDL/DF	
2,4-D 2,4,5-TP (Silvex)	<0.024 <0.004	mg/l mg/l	SW 8150 SW 8150	0.0048/5 0.0008/5	

Ап	aly	sis	Dat	0: 05
	A	naly	st:	SA
	•	 		
		1.1	1.00	

06/14/95

Extraction Date:

Extraction Date: 06/15/9 Analysis Date: 06/15/9 Analyst: S

09:52

CITY OF VENICE

VOLATILE ORGANIC ANALYSIS

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PSI/Clearwator 385-5P051-0091 Page 3 of 15

Date Extracted:

Date Analyzed: 06/15/95 Analyst: JM

NA

Matrix: Soil

LAB #: 06092-01

Client ID: North Pond

Analyte	Results	<u>Units</u>	Method	MDL/DF
<u>r une: 1 vy</u>			EN 9760	5/1
Dichlorodifluoromethane	<5	µg/kg	54V 0200	· 5/1
Chloromethene	<5	µg/kg	SW 8200	5/1
Vinyl chloride	<5	µg/кg	SVV 0200	5/1
Bromomethane	<5	<i>µg</i> /kg	SW 8260	5/1
Chloroethane	<5	µg/kg	SVV 8260	5/1
Trichlorofluoromethane	<5	<i>µg/</i> kg	SVV 8200	5/1
1,1-Dichloroethene	<5	<i>µg/</i> kg	SVV 8200	5/1
Methylene chloride	<5	<i>µg</i> /kg	SVV 8260	5/1 E/1
Trans-1,2-Dichloroethene	<5	<i>µg/</i> kg	SW 8260	0/1 5/1
1.1-Dichloroethane	<5	<i>µg/</i> kg	SW 8260	5/1
cis-1.2-Dichloroethene	<5	<i>µg</i> /kg	SW 8260	5/1
2.2-dichloropropane	<5	µg/kg	SW 8280	5/1
Bromochloromethane	<5	<i>µg/</i> kg	SW 8260	5/1
Chioroform	<5	<i>µg</i> /kg	SW 8260	5/1
1 1 1-Trichloroethane	<5	µg/kg	SW 8260	5/1
Carbon tetrachloride	'<5	µg/kg	SW 8260	6/1
1 1-Dichloropropene	<5	<i>µg/</i> kg	SW 8260	5/1
Renzene	; <5	<i>µgi</i> kg	5W 8260	5/1
1 2-Dichloroethane	<5	<i>µg/</i> kg	SW 8260	6/1
Trichloroethene	<5	<i>µg</i> /kg	SW 8260	5/1
1 2-Dichloropropane	<5	µg/kg	SW 8260	5/1
Dibromemethene	<5	µg/kg	SW 8260	5/1
Bromodichloromethane	<5	<i>µg/</i> kg	SW 8260	5/1
cie-1-3-Dichloropropens	<5	<i>µgl</i> kg	SW 8260	·5/1
Toluana	<5	<i>µg/</i> kg	SW 8260	5/1
trans-1 3-Dichloropropene	<5	<i>µg/</i> kg	SW 8260	5/1
1 1 2-Trichloroethans	<5	<i>µg</i> /kg	SW 8260	5/1
1 2-Dibromoethane	<5	<i>µg/</i> kg	SW 8260	5/1
Tetrachloroethene	<5	<i>µg/</i> kg	SW 8260	5/1
1 3-Dichloronropane	<5	<i>µg</i> /kg	SW 8260	5/1
Chlorodibromomethane	<5	<i>µgl</i> kg	SW 8260	5/1
Chlorobanzene	<5	<i>µg</i> /kg	SW 8260	5/1
1 1 1 2 Tatrachloroethene	<5	<i>µgl</i> kg	SW 8260	5/1
	< 5	<i>µg/</i> kg	SW 8260	5/1
In a p Aylene	<5	<i>µgl</i> kg	SW 8260	5/1
Ettiyibenzene	< 5	<i>µg/</i> kg	SW 8260	5/1
0-AVIBINE	< 5	<i>µg/</i> kg	SW 8260) 5/1 1
	< 5	µg/kg ⁺	SW 8260) <u>5/1</u>
a 1 2 2 Tetrachlornethane	<5	<i>µg</i> /kg	SW 8260) 5/1
Promobonzone	<5	<i>µg/</i> kg	SW 8260) 5/1
1.0.2 Trichleronron208	< 5	<i>µg</i> /kg	SW 8260)* 5/1*
- Browlhunzone	< 5	<i>µgl</i> kg	SW 8260) ~ 5/1. ·
Chlorotoluana	<5	µg/kg	5W 8260	5/1
1 3 5-Trimethylbenzene	< 5	<i>µgl</i> kg	SW 8260	5/1
A-Chlorotolugne	<5	<i>µg/</i> kg	SW 826	D = 5/1 //
tert-Butvibenzene	<5	, <i>'C'</i> /kg	SW 826	0 5/1
1 2 4-Trimethylbenzene	<5	<i>µg</i> /kg	SW 826	U 5/1
spc-Butylbenzene	<5	<i>µg</i> /kg	SW 826	0 5/1

It ontiound)

CITY OF VENICE

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PSI/Clearwater 385-5P051-0091 Page 4 of 15

Matrix: Scil

LOW LEVEL

LAB #: 06092-01 Client ID: North Pond

VOLATILE ORGANIC ANALYSIS (cont.)

Analyte	<u>Results</u>	<u>Units</u>	Method	MDL/DF
Analyte 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene p-Isopropyltoluene Isopropylbenzene n-Butylbenzene 1,2-Dibromo-3-chloropropane 1,2,4-Trichlorobenzene Hexachlorobutadiene Naphthalene	<u>results</u> <5 <5 <5 <5 <5 <5 <5 <5 <5 <5	μg/kg μg/kg μg/kg μg/kg μg/kg μg/kg μg/kg μg/kg μg/kg μg/kg	SW 8260 SW 8260	5/1 5/1 5/1 5/1 5/1 5/1 5/1 5/1 5/1 5/1
1,2,3-Trichlorobenzene	< 5	parra	J	

PURGEABLE AROMATICS

MDL/DF Method Units Results Analyto Extraction Date: 10/1 SW 8020 ug/kg <10 NA Benzene : 10/1 SW 8020 ug/kg <10 Analysis Date: Toluene 10/1 SW 8020 ug/kg <10 06/14/95 Ethylbenzene 10/1 SW 8020 <10 ug/kg Analyst: KT Total Xylenes -/-SW 8020 ug/kg <10 **Total VOAs** 10/1 SW 8020 ug/kg <10 MTBE

INORGANIC ANALYSES

Analyte	Results .	<u>Units</u>	Method	Analysis Date	<u>Analyst</u>	INIDE
pH in Soil Total Solids Total Phosphorus Total Nitrogen Nitrate + Nitrite	9.12 37 70.3 173 0.9 172	SU % mg/kg mg/kg mg/kg mg/kg	SW 9045A SM 2540G EPA CE-81-1 EPA CE-81-1 EPA CE-81-1 EPA CE-81-1	06/15/95 06/15/95 06/16/95 06/16/95 06/16/95 06/16/95	MC HM MC NE NE NE NE	n/a 1 n/a n/a n/a

TCLP: SW846 1311 / METALS

	хч х мад •	Results	Units	Method	Analysis Date	Analyst	MDL
Analyte Arsenic Barium Cadmium Chromium Lead Mercury Selenium		<0.025 26 <0.05 <0.05 <0.1 <0.001 <0.06 <0.1	mg/l mg/l mg/l mg/l mg/l mg/l mg/l	SW 7060 SW 7080 SW 7130 SW 7190 SW 7420 SW 7471 SW 7740 SW 7760	06/15/95 06/15/95 06/15/95 06/15/95 06/16/95 06/16/95 06/15/95 06/15/95	CP CP CP CP CP CP CP CP CP	0,025 1 0.05 0.05 0.1 0.001 0,05 0.1



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PSI/Clearwater 385-5P051-0091 Page 5 of 15

LAB #: 06092-02

TCLP: SW846 1311 / VOLATILES

Client ID: South Pond

Analyte	<u>Results</u>	<u>Units</u>	Method	MUCIOF
Analyte Vinyl Chloride 1,1-Dichloroethene 2-Butenone Chloroform 1,2-Dichloroethene Carbon tetrachloride Benzene Trichloroethene Tetrachloroethene Chlorobenzene	<0.05 <0.025 <0.05 <0.025 <0.025 <0.025 <0.025 <0.025 <0.025 <0.025 <0.025	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l	SW 8240 SW 8240	0.01/5 0.005/5 0.005/5 0.005/5 0.005/5 0.005/5 0.005/5 0.005/5 0.005/5 0.005/5
1,4-Dichlorobenzene	~~~~~			- 15 A

TCLP: SW846 1311 / SEMI-VOLATILES

Analyte	Results	Units	Method	MDL/DF
Analyte Pyridine 1,4-Dichlorobenzene 2-Methylphenol 3 & 4-Methylphenol Hexachloroethane Nitrobenzene Hexachlorobutadiene 2,4,5-Trichlorophenol 2,4,6-Trichlorophenol 2,4-Dinitrotoluene Hexachlorobenzene Pentachlorophenol	<0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05 <0.05	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l	SW 8270 SW 8270	0.01/5 0.01/5 0.01/5 0.01/5 0.01/5 0.01/5 0.01/5 0.01/5 0.01/5 0.01/5 0.01/5 0.01/5 0.01/5 0.01/5
4,4'-D.D.T.	< 0.05	109/1		

< 0.004

TCLP: SW 1311 / ORGANOCHLORINE PESTICIDES

's		•• •• -	Mathod	MDL/DF	
Analyte G-BHC Heptachlor Heptachlor epoxide Endrin Methoxychlor Chlordane Toxaphene	<u>Results</u> <0.0025 <0.0025 <0.0025 <0.0025 <0.0025 <0.0025 <0.0025 <0.0025	Units mg/l mg/l mg/l mg/l mg/l mg/l	Wethod SW 8080 SW 8080 SW 8080 SW 8080 SW 8080 SW 8080 SW 8080	0.0005/5 0.0005/5 0.0005/5 0.0005/5 0.0005/5 0.0005/5 0.0005/5	Extraction D O6/ Analysis D O6/ Analys
	TCLP: SW846 1	311 / CHLC	DRINATED H	ERBICIDES	Fxtraction
<u>Analyte</u>	<u>Results</u> <0.024	<u>Units</u> mg/l	Method SW 8150	0.0048/5	O6 Analysis O6

mg/l

SW 8150

0.0008/5

2,4-D 2,4,5-TP (Silvex)

Matrix: Soil

Extraction Date: 06/14/95 Analysis Date: 06/15/95 Analyst: JM

Extraction Date: 06/14/95 Analysis Date: 06/15/95 Analyst: SA

> Date: 15/95 Date: 15/95 之 t: SA

Date: \$/15/95 Date: 06/15/95 Analyst: SA

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PSI/Clearwater 385-5P051-0091 Page 6 of 15

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LAB #: 06092-02 Client ID: South Pond

VOLATILE ORGANIC ANALYSIS

Matrix: Soil

Analyte	Results	Units	Method N	NDL/DF	ю -	
	- 5	ualka	SW 8260	5/1	•	
Dichlorodifluoromethane	<5 <5	ualka -	SW 8260	5/1	· · · ·	E.t. materia
Chloromethane	< 5	ualka	SW 8260	5/1	, C	ate Extracteu:
Vinyl chloride	< 5	ualka	SW 8260	5/1		NA(
Bromomethane	< 5	pgng	SW 8260	5/1	t i t	Date Analyzed:
Chloroethane	< 5	pying walka	SW 8260	5/1		06/15/95
Trichlorofluoromethane	<5	µying u=llid	SW/ 8260	5/1	- ^{- 4}	Analyst: JM
1 1-Dichloroethene	<5	pgikg	SW 8260	5/1		
Mathylene chloride	<5	μġikg	SW 0200	5/1	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	- ¥1
Trans-1 2-Dichlorosthene	<5	haika	544 0200	5/1	a de la seconda de la second	
1 1-Dichlorosthane	<5	µg/kg	SVY 0200	5/1		
ois-1.2-Dichloroethene	、<5	<i>µg</i> /kg	SW 8200	5/1		
2.2-dichlorontoDBDB	<5	µg/kg	SVV 8200	5/1		
Reamarbloromethane	<5	µg/kg	SVV 0200	5/1		
Storaform	<5	<i>µg/</i> kg	544 0200	5/1		
1 1 1 Trichloroethane	<5	<i>µg/</i> kg	SW 8200	5/1		
1,1,1-Inchlorocaida	<5	µg/kg	SW 8260	5/1		
	<5	<i>µg/</i> kg	SVV 8200	5/1		
1,1-Otemoroproperie	<5	µg/kg	SW 8260	5/1		
Benzene	<5	µg/kg	SW 8260	5/1		
T.JDichloroethane	<5	<i>µg/</i> kg	SW 8200	5/1		
1 Diablecopropage	<5	<i>µg/</i> kg	SW 8260	5/1		
1,2-Oldhoropropano	<5	<i>µg/</i> kg	SW 8260	5/1		
Dipromotinetitalie	<5	<i>µgI</i> kg	SW 8260	5/1		
Blowoolciiolomemano	<5	<i>µg/</i> kg	SW 8260	5/1		
CIS-1,3-DICHIOTOPTOPETIC	<5	<i>µg/</i> kg	SW 8260	5/1 C/1		
Toluene	<5	<i>µg/</i> kg	SW 8260	9/1 E/1		
trans-1,3-Dictitorophopolie	< 5	<i>µg</i> /kg	SW 8260	5/1		
1,1,2-Inchioroeurane	<5	µg/kg	SW 8260	5/1	•	
1,2-Dibromoeurane	<5	<i>µgl</i> kg	SW 8260	5/1		
	<5	<i>µgl</i> kg	SW 8200	5/1		
1,3-Dichioropropane	<5	<i>µg</i> /kg	SW 8260	5/1		
Chlorodibromoniacitaire	< 5	<i>µg/</i> kg	SW 8260	. 5/1 		
Chloropenzene	< 5	<i>µgl</i> kg	SW 8260	5/1 E/1		
1,1,1,2-18trachioroethans	<5	µg/kg	SW 8260	5/1. E/1		
m & p Xylene	<5	<i>µg/</i> kg	SW 8260	5/1		
Ethylbenzene	<5	<i>µg</i> /kg	SW 8260	5/1		•
o-Xylene	< 5	<i>µg1</i> kg	SW 8260	5/1	3	
Styrene	< 5	µg/kg	SW 8260	5/1	- 	-
Bromoform	< 5	<i>µg/</i> kg	SW 8260	5/1		
1,1,2,2-Tetrachioroethane	<5	µg/kg	SW 8260) 5/1	·	
Bromobenzene	< 5	<i>µg/</i> kg	SW 8260) 5/1	• 41 T	
1,2,3-Trichloropropane	<5	<i>µgl</i> kg	SW 8260) 5/1		900 - 12 00
n-Propylbenzene	< 5	µg/kg	SW 8260) (°5/1) n (°14)		بهرد.
2-Chlorotoluene	< 5	µg/kg	SW 8260) 5/1 5/1		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
1,3,5-1 rimethylpenzesie	<5	µg/kg	SW 826	U 2 0/I ⊂ = 13		
4-Chlorotoluene	<5	µg/k	g SW 826	0 5/1		•
tert-Butyidenzene	<5	µġlk	g SW 826	0 5/1 6 E/1		
sec-Butylbenzene	<5	µg/k	g SW 826	U SIN	•	



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PSI/Clearwater 385-5P051-0091 Page 7 of 15

Matrix: Soil

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LAB #: 06092-02

VOLATILE ORGANIC ANALYSIS (cont.)

Client ID: South Pond

Analyte	Results	<u>Units</u>	Method	MDL/DF
1 3-Dichlorobenzene	<5	<i>µg</i> /kg	SW 8260	5/1
1 4-Dichlorobenzene	<5	µg/kg	SW 8260	5/1
1 2-Dichlorobenzene	<5	µg/kg	SW 8260	5/1
n-Isnoropvitolugne	<5	<i>µg</i> /kg	SW 8260	5/1
Isopropylbenzene	<5	<i>µg/</i> kg	SW 8260	° 5/1
n-Butvlbenzene	<5	<i>µgl</i> kg	SW 8260	5/1
1.2-Dibromo-3-chloropropane	<5	<i>µg</i> /kg	SW 8260	5/1
1 2 4-Trichlorobenzene	<5	<i>µg/</i> kg	SW 8260	5/1
Hevachlorobutadiana	<5	<i>µg/</i> kg	SW 8260	5/1
Nenhthalene	<5	<i>µg/</i> kg	SW 8260	5/1
1,2,3-Trichlorobenzene	<5	<i>µg/</i> kg	SW 8260	5/1

PURGEABLE AROMATICS

					LOW LEVEL		
<u>Analyte</u>	Results	Units	Method	MDL/DF			
Benzene	<10	ug/kg	SW 8020	10/1	Extraction Date:		
Toluene	<10	ug/kg	SW 8020	10/1	Analysis Date:		
Ethylbenzene	<10	ug/kg ug/kg	SW 8020	10/1	06/14/95		
Total Xylenes	<10	vg/kg	SW 8020	-1•	Analyst: KT		
MTBE	<10	ug/kg	SW 8020	10/1			

INORGANIC ANALYSES

Analyte	<u>5 Units</u>	Method	Analysis Date	Analyst	MDL
pH in Soll9.23Total Solids36Total Phosphorus43.1Total Nitrogen86Nitrate + Nitrite0.8TKN85	2 SU	SW 9045A	06/15/95	MC	n/a
	%	SM 2540G	06/15/95	HM	1
	mg/kg	EPA CE-81-1	06/16/95	MC	1
	mg/kg	EPA CE-81-1	06/16/95	NE	n/s
	mg/kg	EPA CE-81-1	06/16/95	NE	n/s
	mg/kg	EPA CE-81-1	06/16/95	-NE	n/s

TCLP: SW846 1311 / METALS

Anelyte	Results	Units	Method	<u>Analysis Date</u>	<u>Analyst</u>	MDL
Arsenic Barium Cadmium Chromium Lead Mercury Selenium Silvo	<0.025 35 <0.05 <0.05 <0.1 <0.001 <0.05 <0.1	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l	SW 7060 SW 7080 SW 7130 SW 7190 SW 7420 SW 7471 SW 7740 SW 7760	06/15/95 06/15/95 06/15/95 06/15/95 06/16/95 06/16/95 06/15/95	CP CP CP CP CP CP CP CP CP	0.025 1 0.05 0.05 0.1 0.001 0.05 0.1

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PSI/Clearwater 385-5P051-0091 Page 8 of 15

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LAB #: 06092-03 Client ID: Equipment

TCLP: SW846 1311 / VOLATILES

Matrix: Water

Extraction Date:

Analysis Date:

06/12/95

06/13/95 Analyst: SA

Analyte	Results	<u>Units</u>	Method	MDL/DF	and the second
Vinyl Chloride 1,1-Dichloroethene 2-Butanone Chloroform 1,2-Dichloroethane Carbon tetrachloride Benzene Trichlorpethene Tetrachloroethene Chlorobenzene 1,4-Dichlorobenzene	<0.01 <0.005 <0.01 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005 <0.005	mg/l mg/l mg/l mg/l mg/l mg/l mg/l mg/l	SW 8240 SW 8240	0.01/1 0.005/1 0.01/1 0.005/1 0.005/1 0.005/1 0.005/1 0.005/1 0.005/1 0.005/1	Extraction Date: 06/14/95 Analysis Date: 06/15/95 Analyst: JM
			1.11		

TCLP: SW846 1311 / SEMI-VOLATILES

Analyte	Results Units	<u>Method</u>	MDL/DF
Analyte Pyridine 1.4-Dichlorobenzene 2-Methylphenol 3 & 4-Methylphenol Hexechloroethane Nitrobenzene Hexachlorobutadiene 2.4.5-Trichlorophenol	Results Units <0.01	Method SW 8270 SW 8270	0.01/1 0.01/1 0.01/1 0.01/1 0.01/1 0.01/1 0.01/1 0.01/1 0.01/1
2,4,6-Trichlorophenol 2,4-Dinitrotoluene Hexachlorobenzene Pentachlorophenol 4,4'-D.D.T.	<0.01 mg/ <0.01 mg/ <0.01 mg <0.01 mg <0.01 mg <0.01 mg	SW 8270	0.01/1 0.01/1 0.01/1 0.01/1 0.01/1

TCLP: SW 1311 / ORGANOCHLORINE PESTICIDES

Applyte	Results	<u>Units</u>	Method	MDL/DF	
G-BHC Heptachlor Heptachlor epoxide Endrin Methoxychlor Chlordane Toxaphene	<0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005 <0.0005	mg/l mg/l mg/l mg/l mg/l mg/l	SW 8080 SW 8080 SW 8080 SW 8080 SW 8080 SW 8080 SW 8080 SW 8080	0.0005/1 0.0005/1 0.0005/1 0.0005/1 0.0005/1 0.0005/1 0.0005/1	Extraction Date: 06/15/95 Analysis Date: 06/15/95 Analyst: SA
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TCLP: SW846 1311 / CHLORINATED HERBICIDES

Analyte	Results	Units	Method MDL/DF	- 8
2,4-D 2,4,5-TP (Silvex)	<0.0048 <0.0008	mg/l mg/l	SW 8150 0.0048/1 SW 8150 0.0008/1	

Extraction Date: 06/15/95 Analysis Date: 06/15/95 Analyst: SA

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PSI/Clearwater 385-5P051-0091 Page 9 of 15

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LAB #: 06092-03 Client ID: Equipment

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VOLATILE ORGANIC ANALYSIS

Matrix: Water

Date Extracted:

Date Analyzed: 06/15/95 Analyst: SA

NA

	Results	Units	Method	MDL/DF
Analyte				. د
Dishterediffuoromethans	<5	<i>µg/</i> kg	SW 8260	5/1
	<5	<i>µg</i> /kg	SW 8260	5/1
Culotometriane	<5	<i>µg/</i> kg	SW 8260	5/1
Vinyl chloride	<5	µq/kg	SW 8260	5/1
Bromomethane	<5	µq/kg	SW 8260	5/1
Chlorosthane	<5	µg/kg	SW 8260	5/1
Trichlorofluorometnane	< 5	ualka	SW 8260	5/1
1,1-Dichloroethene	 < 5	ualka	SW 8260	5/1
Methylene chloride	~5	ualka	SW 8260	5/1
Trans-1,2-Dichloroethene	~5	ualko	SW 8260	s 1 5/1 1 di
1,1-Dichloroethane		parka	SW 8260	5/1
cis-1,2-Dichloroethene	< 0 < 5	pyrky	SW 8260	5/1
2,2-dichloropropane		pyrky	SW 8260	0.5/1
Bromochloromathane	< 5	µying :	SW/ 8250	5/1
Chloroform	< 5	pyrky	SW 8260	5/1
1.1.1-Trichloroethane	<5	μg/kg	SW 8280	5/1
Carbon tetrachloride	<5	<i>µg/</i> kg	5W 9200	5/1
1.1-Dichloropropene	<5	<i>µg</i> /kg	544 0200	5/1
Benzene	< 5	<i>µg</i> /kg	SVV 8200	5/1
1 2-Dichloroethane	<5	µg/kg	SW 8260	. 5/1
Trichloroethene	<5	<i>µg/</i> kg	SW 8260	5/1
1 2-Dichloropropane	<5	<i>µg/</i> kg	SW 8260	0/1
Dibromomethane	<5	<i>µg/</i> kg	SW 8260	5/1
Bramodichloromethane	<5	µg/kg	SW 8280	5/1 5/1
ala 1.2 Diabloronropene	<5	<i>µg</i> /kg	SW 8260	5/1
Cig-1,3-Dichiotoproporto	<5	<i>µg/</i> kg	SW 8260	5/1
10102112	<5	<i>µg/</i> kg	SW 8260	5/1
1 1 0 Triphloropthana	<5	<i>µg</i> /kg	SW 8260	5/1
1,1,2-11Chiorosthane	<5	<i>µgl</i> kg	SW 8260	5/1
T,Z-Didioinoenano	<5	<i>µg/</i> kg	SW 8260	5/1
16Ilaculotoattielle	< 5	<i>µg</i> /kg	SW 8260	5/1
1,3-Dichloropropane	<5	<i>µg/</i> kg	SW 8260	5/1
Chlorodolottomethano	<5	<i>µg</i> /kg	SW 8260	5/1
	<5	<i>µg/</i> kg∞	SW 8260	5/1 r/1
	<5	<i>µg/</i> kg	SW 8260) 5¥1123
	<5	<i>µgi</i> kg	SW 8260)
Ethyloenzene	<5	<i>µg/</i> kg	SW 8260	
· O-VAISIIR	<5	<i>µg/</i> kg	SW 8260) 0/1
Styrene	<5	<i>µgl</i> kg	SW 8260) 5/1
Bromotorin	< 5	<i>µg/</i> kg	SW 8260	ງ 5/1
7,1,2,2-1 etracino de chano	< 5	<i>µg/</i> kg	SW-8260) 5/1-
Bromobenzene	. <5	<i>µg/</i> kg	SW 826) 5/1
1,2,3-Inchloropropane	<5	<i>µg/</i> kg	SW 826	D 5/1
0. Chievetelugne	<5	<i>µg/</i> kg	SW 826	0 5/1
2-Chlorototelle	<5	<i>µg1</i> kg	SW 826	0
1,3,3-mineurybenzono	<5	<i>µg/</i> kg	SW 826	0 5/1
And Quitulbonzana	< 5	<i>µşi</i> kg	SW 826	0 5/1
tert-outymenterio	<5	µg/kg	SW 826	0 5/1
1,2,4 Hintetry Doneono	<5	μglkç	sw 826	0 5/1
28C.DOILINGUE			1	7 ·

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PSI/Clearwater 385-5P051-0091 Page 10 of 15

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LAB #: 06092-03

VOLATILE ORGANIC ANALYSIS (cont.)

Matrix: Water

Client ID: Equipment

1.3-Dichlorobenzene<5	Analyte	Results	<u>Unlts</u>	Method	MDL/DF
1,2,3-Trichlorobenzene	1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene p-Isopropyltoluene Isopropylbenzene n-Butylbenzene 1,2-Dibromo-3-chloropropane 1,2,4-Trichlorobenzene Hexachlorobutadiene Naphthalene 1,2,3-Trichlorobenzene	<5 <5 <5 <5 <5 <5 <5 <5 <5 <5 <5 <5 <5	µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg µg/kg	SW 8260 SW 8260	5/1 5/1 5/1 5/1 5/1 5/1 5/1 5/1 5/1 5/1

PURGEABLE AROMATICS

LOW LEVEL

	Results	Units Method	WIDLIDE	
Analyte			4/4	Extraction Date:
	<1	ug/1 EPA 602	2 47 F	NA
Benzena	~1	ug/I EPA 602	1/1	Amalyzie Data:
Toluene		ug/1 EPA 602	1/1	06/13/95
Ethylbenzene		10/1 EPA 602	°. (1/1 ° ⊂	Applyet' KT
Total Xylenes		110/1 EPA 602	- -	, Allalyst,
Total VOAs		ug/1 EPA 602	1/1	
MTBE		• • • • • • • • • • • • • • • • • • •		

INORGANIC ANALYSES

	Recults	<u>Units</u>	Method	Analysis Date	Analyst MUL
Anelyte Total Phosphorus Total Nitrogen Nitrate + Nitrite TKN	0.62 0.7 0.5 0.2	mg/l mg/l mg/l mg/l	EPA 365.4 calculation EPA 353.2 EPA 351.4	06/16/95 08/16/95 06/15/95 06/16/95	MC 0.05 NE 0.1 NE 0.05 NE 0.1

TCLP: SW846 1311 / METALS

an a	•		Units	Method	Analysis Date	Analyst	MDL
Analyte Arsenic Barium Cadmium Chromium Lead Mercury Selenium		<pre><0.025 <1 <0.05 <0.05 <0.1 <0.001 <0.05 <0.01 <0.05 <0.1</pre>	mg/l mg/l mg/l mg/l mg/l mg/l mg/l	SW 7060 SW 7080 SW 7130 SW 7190 SW 7420 SW 7471 SW 7740 SW 7760	06/15/95 06/15/95 06/15/95 06/15/95 06/16/95 06/16/95 06/15/95 06/15/95	CP CP CP CP CP CP CP CP CP	0.025 1 0.05 0.05 0.1 0.001 0.05 0.1



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PSI/Clearwater 385-5P051-0091 Page 11 of 15 문화

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LAB #: 06092-04 .

PURGEABLE AROMATICS

Matrix: Water

Client	ID:	Trip	

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Client ID: Trip	· · · ·				· · · · · · · · · · · · · · · · · · ·
Analyte	Results	<u>Units</u>	Method	MDLIDF	
Benzene Folueno Ethylbenzone Total Xylenes Total VOAs MTBE	<1 <1 <1 <1 <1 <1 <1 <1	μg/l μg/l μg/l μg/l μg/l μg/l	EPA 602 EPA 602 EPA 602 EPA 602 EPA 602 EPA 602	1/1 1/1 1/1 1/1 -/- 1/1	Extraction Date: NA Analysis Date: 06/13/95 Analyst: KT



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PSI/Clearwater 385-5P051-0091 Page 12 of 15

	QUAL	Matrix: Soll						
Analyta	Lab A Batch#	Analytical <u>Blank</u>	MOL	Units	QC <u>%REC</u>	Spike <u>%REC</u>	Dup %RPD	Method
Milaryte		<0.05	0.05	mo/l		104	•	8240
Vinyl Chloride	WR0912	<0.05	D 025	mall		101	· .	8240
1,1-Dichloroethene		<0.025	0.025	mg/l	• -	110		8240
2-Butanone		<0.05	0.05	mg/l		104		8240
Chloroform		< 0.025	0.025	ng/i		100		8240
1 2-Dichloroethane	•	<0,025	0.025	ពាច្បវា		104	1.1.1.1	8240
Carbon tetrachloride		<0.025	0.025	mg/i	· · · ·	101		8240
Repair Condonioner		< 0.025	0.025	mg/l		100		8240
Denzene		<0.025	0.025	mg/i	·	120	•	8240
Trichlofoetherie		< 0.025	0.025	mg/l		130		8240
Tetrachloroethene	•	< 0.025	0.025	mg/l		90		8240
Chlorobenzene		< 0.025	0.025	mg/l		88		02+0
1,4-Dichlorobenzene								Matrix Soil
					National Sector		D	WIGUIN: CO.
	1.00	Analytical			ac .	Spike		Method
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Pyridine	AB0014	<0.01	0.01	ma/l		49		0270
1,4-Dichlorobenzene			0.01	ma/l		79		8270
2-Methylphenol		< 0,01	0.01	mg/l		71		8270
3 & 4-Methylphenol	and the second	< 0.01	0.0	i ma/l		52		8270
Hexachloroethane		<0.01	0.0			87		8270
Nitrobenzene		<0.01	0.0	t mg/l		62		8270
Hexachlorobutadiene		<0.01	0.0	1 mg/l		103	i thi an	8270
2.4.5-Trichlorophenol		<0.01	0.0	n ing/i		107		8270
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2,4,5-TP (Silvex)						÷.		e en al a

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PSI/Clearwater 385-5P051-0091 Page 13 of 15

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QUALITY CONTROL: ORGANIC ANALYTES

Matrix: Soil

•	lah	Matrix			MS	MSD	ac			
	Databili	Blank	MDL	Units	%REC	%REC	Limits	<u>%RPD</u>	%HL	Method
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Dichlorodifluoromethane	MBOPID	~0	5	un/ka	1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	si in si	•	•		8260
Chloromethane		<0	5	ud/kn		•		- 		8260
Vinyl chloride		<0	5	ug/kg	1. A. A.	•				8260
Bromomethane		<0	. 5 E		f,	• •				8260
Chloroethane		< 6	ວ =	uying ualka		· · ·				8260
Trichlorofluoromethane		< 5	· 5 E	ug/kg	86 -	84	59-172	2	22	8260
1,1-Dichloroethene		<5	5 E	uging	00					8260
Methylene chloride		<5	ວ. ອ	uy/ky	1. 1. 1. 1.		1.42	•		8260
Trans-1,2-Dichloroethen	3	<5	5 	ug/kg	·	e d'an se de	1997 - N.	1 - 1 ⁴		8260
1.1-Dichloroethane	•	<5	5	ug/ky						8260
cis-1.2-Dichloroethene		<5	5	ug/kg						8260
2.2-dichloropropane	1999 - 1999 -	<5	5	ug/kg		c at a				8260
Bromochloromethane		<5	- b	ug/Kg		و المراجع الم	gar ya a			8260
Chloroform		<5	5	ug/kg				$(1,2,\ldots,k_n)$		8260
1 1.1-Trichloroethane		<5	5	ug/kg		st set sati	na Tanàna amin'ny fisiana			8260
Carbon tetrachloride		<5	5	ug/kg		n de la seconda				8260
1 1-Dichloropropene		<5	5	ug/kg			62 127	0	24	8260
Benzene		<5	5	ug/kg	118	418	02-157	. Ť.		8260
1 2-Dichlorosthane	en en stad v	<5	5	ug/kg		101	66-147	11	21	8260
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1.7 Dibrompethane		<5	5	ug/kg				dan seria se Alta Alta		8260
Terrachlorgetheng		< 5	5	ug/kg						8260
		<5	5	ug/kg		- P				8260
Chlorodibromomethane) }	<5	5	ug/kg		50	CO 123	2 G	21	8260
Chlorobastana		<5	5	ug/kg	116	105	60-150	5		8260
	ana	< 5	<i>i</i> 5	ug/kg	1. C. 19.				÷ .	8260
1,1,1,2-19tractionoodi		<5	5	ug/kg			11 ·			8260
m & p Aylene		<5	5	ug/kg						8260
Ethylognzene		<5	• 5	ug/kg		•	5		,	8260
0-Xylene	-	<5	· 5	i ug/kg			• • • • •		4	8260
Styrene	1	~ <5	5 5	ug/kg	e de la constante de la consta					8260
Broinoronn 1 1 7 2-YotrachloroBi	папе	· <5	5	i ug/kg			~		•	8260
	ya 4.	<5	the E	5 ug/kg				-		8250
1 3 3 Triphoran(0030	<u>م</u>	<5	20 - E	5 ug/kg				***	.	8260
- Bropylbopzene	A REVER	<5	and the second s	5 ug/kg) . .				i di	8260
7 Chlorotohume		<5	- I	5 ug/kg	3		, s. A		1997 - 1997 -	8260
1 2 5 Trimathulhenze	ne ·	<5	-	5 úg/kg	j				4 ¹	8260
A.Chlarotoluene		<5	1. J	5 ug/kg	3			14. 2000 - 14. 2000 - 14.		8260
Hart Butylbenzene		<5		5 jug/kg	3			•		8260
1.7 A.Trimethylhenze	ne	< 5		5 ug/k	g [.]			•		8260
sac-Butylbanzane	en e	ک ک	•	5 ug/k	ម្ភ 🦾 🗄	ar m		•		



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PSI/Clearwater 385-5P051-0091 Page 14 of 15

QUALITY CONTROL: ORGANIC ANALYTES

Matrix: Soil

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Analyte	Lab Batch#	Matrix <u>Blank</u>	MDL	<u>Units</u>	MS <u>%REC</u>	MSD <u>%REC</u>	Umita Umita	<u>%RPD</u>	<u>%RL</u>	Method	
(SW 8260 cont.) 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,2-Dichlorobenzene p-Isopropyltoluene Isopropylbenzene n-Butylbenzene 1,2-Dibromo-3-chloroprop 1,2,4-Trichlorobenzene Hexachlorobutadiene Naphthalene 1,2,3-Trichlorobenzene	pane	< 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	55555555555555555555555555555555555555	ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg ug/kg						8260 8260 8260 8260 8260 8260 8260 8260	
		1. Sec. 1.	gen fen in			•				Matrix: 201	.1

Analyte	Lab Analytical <u>Batch# Blank</u>	MDL U	DC nits <u>%REC</u>	Spike D <u>%REC</u> <u>%</u> I	up <u>3PD Method</u>
Benzene	AB0614 <1 <1	1 / 1 /	ig] l 92 ig l 97	90 95 98	8020 8020 8020
Ethylbenzene Total Xylenes MTBE	<1 <1 <1 <1	1 4 1 7 1 1	19/1 97 19/1 94 ug/1 94	118 99	8020 8020

Matrix: Water

Analyte	Lab <u>Batch#</u>	Analytical <u>Blank</u>	MDL	OC <u>Units</u> %REC	Spike Dup <u>%REC</u> %RPD	Method
Benzene Toluene Ethylbenzene Total Xylenes MTBE	AB0613	<1 <1 <1 <1 <1 <1	1 1 1 4	μg/ξ 101 μg/ξ 101 μg/ξ 101 μg/ξ 100 μg/ξ 99	99 101 102 97 98	602 602 602 602 602

QUALITY CONTROL DATA: INORGANIC ANALYTES

Matrix: Soil & Water

Analyte	Lab <u>Batch#</u>	Anslytical <u>Bisnk MDL</u>	QC <u>Units</u> %REC	Spike Dup <u>%REC %RPD</u>	<u>Method</u>
Arsenic	AB0615	<0.025 0.05	mg/l 104	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	7080
Barium	AB0615	<1 1	mg/l 110		7080
Cadmium	AB0615	<0.05 0.05	mg/l 95		7130
Chromium	AB0615	<0.05 0.05	mg/l 92		7190
Lead	AB0616	<0.1 0.1	mg/l 94		7420
Mercury	AB0616	<0.001 0.001	mg/l 85		7471
Selenium	AB0615	<0.05 0.05	mg/l 94		7740
Silver	AB0615	<0.1 0.1	mg/l 100		7760

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PSI/Clearwater 31 385-5P051-0091 Page 15 of 15

SURROGATE RECOVERY SUMMARY (Soil & Water)

psi lab #	1,2- Dichloroothane-d4 (624/8240)	Toluene-d8 (624/8240)	4-Bromo- fluorobenz ene (624/8240)	4-Bromo- Nuorobenzene (8260)	Dibromofluoromethane (8260)	Toluene-d8 (8260)
06092-01	110	108	112	118	92	116
06092-02	111	107	113	94	90	104
06092-03	110	107	113	94	102	102
PSI LAB #	2-Fluorophenol (625/8270)	Phenol-d5 (825/8270)	Nitrobenzene-c (625/8270)	15 2-Fluorobip (625/82)	2,4,6- henyl Tribromophenol 70) (625/8270)	Terphenyl-d14 (625/8270)
06092-01	45	39	96	86	97 ·	114
06092-02	21	19 `	84	81	44	113
06092-03	43	31	66	82	79	82

PSI LAB # 8, (60	a,a-TFT)2/8020)	Dibutyl Chlorendate (608/8080)) DCAA (8150)	
06092-01	87	121	120	, i
06092-02	91	79	124	
06092-03	105	114	117	· · ·
06092-04	105	• · · · · · · · · · · · · · · · · · · ·		Ϋ́.

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APPENDIX D - LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION





Analytical Report

For: Mr. Michael Bair Professional Service Industries, Inc. 5801 Benjamin Center Drive Suite 112 Tampa, FL 33634 CC:

> Order Number: B421112 SDG Number: Client Project ID: 552-4G029 Project: City of Venice Report Date: 03/24/2004 Sampled By: Client Sample Received Date: 03/12/2004 Requisition Number: Purchase Order:

Michael F. Valder, Project Manager mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.



STL	Tampa	6712	Benjamin	Road, Suite	100 -	Tampa F	L 33634 7	[e]ephone:	(813) 88	5-7427 Fax:(813)) 885-7049
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					Sam	ple	Summai	ry	х* х*	8 - J.	•
	Date Rec	Order: ceived:	B421112 03/12/200	4	Clien Projec	it: Prof t: City	essional of Venic	Service I e	ndustrie	s,Inc.	·
	Client Sa B-2A	mple ID	. •	. •	L B	ab Samp] 421112*1	e ID	Matrix Solid	· · · · ·	Date Sampled 03/11/2004 11:	30 ¹
	в-3 В-6 В-8				B	421112*2 42 <u>1112</u> *3 42 <u>1112</u> *4		Solid Solid		03/11/2004 14: 03/11/2004 14: 03/11/2004 15:	50 10



UTILITIES-ADMIN. DIV. ASST. U.D. - ENGINEERING ASST. U.D. - OPERATIONS CITY MANAGER CITY ENGINEER CITY ENGINEER CITY CLERK CITY ATTORNEY TOM LAALLER TO W Faced

July 23, 2004

Re:

City of Venice Utilities Department 401 W. Venice Ave. Venice, Florida 34285

Attention: R. Christopher Sharek, P.E.

Laboratory Testing Pinebrook Park Lime Holding Ponds • Residual Material City of Venice PSI Project No. 387-45045

Dear Mr. Sharek:

In accordance with our Proposal No. 387-4140, dated July 14, 2004, accepted by John Lane, Director of Utilities for the City of Venice on July 22, 2004, PSI has completed the requested sampling and tested of residual material from the north and south lime holding ponds at Pinebrook Palms. The City has expressed an interest in the potential reuse of this residual material as fill for typical embankment and grading applications.

One 5 gallon bucket of residual soil was obtained from each pond, by a PSI technician. PSI performed classification tests (Atterberg limits and Grain Size) and a modified Proctor test on each sample. The results are summarized below. The laboratory test data sheets are attached.

Sample ID:	North Holding Pond
Visual Identification:	White silt
Atterberg Limits:	Non-Plastic
Grain Size:	64% Silt, 26% clay, 10% sand
USCS Classification:	ML (Low plasticity silt)
Max Proctor Density:	79 pcf @ 23% moisture content
Sample ID:	South Holding Pond

Visual Identification:South Holding PondVisual Identification:White siltAtterberg Limits:Non-PlasticGrain Size:64% Silt, 34% clay, 2% sandUSCS Classification:ML (Low plasticity silt)Max Proctor Density:79 pcf @ 19% moisture content





The samples contain a large percentage of silt and the remainder is mostly clay. The samples are very light in weight. Typical fill soil has dry density of 100 to 110 pounds per cubic foot (pcf). The samples both had a dry density of 79 pcf. Local practice typically specifies that the silt and clay portion of the soil used as fill should be less than 10 to 12% of the total soil sample by weight. These two samples had silt and clay portions of 90 and 98%. Soils with a larger portion of silt and clay are more moisture sensitive and difficult to compact. Soils with a large percentage of only silt are also very difficult to compact because the soil tends to liquefy with the addition of water, not unlike trying to compact a pile of ping-pong balls.

To make this residual soil easier to handle and compact, it would need to be mixed with a large percentage of typical fill soil, such as sand or slightly silty sand. We estimate that the mixture would need to contain 80 to 90% conventional fill soil, requiring 5 to 10 parts of conventional fill to one part of residual soil. Such a mixing operation may not be economical, depending upon the alternative uses or disposal options for the residual soil.

If the City of Venice wishes to pursue the mixing of the residual soil, we recommend additional laboratory testing. The testing would include the preparation of samples at varying percentages of conventional and residual material. The samples would then be tested in order to determine the maximum amount of residual material that can be added to conventional fill without materially affecting its ability to be compacted.

It has been pleasure providing these services to the City of Venice, under our ongoing services contract. Please let us know if you would like to further investigate the use of this residual material

Respectfully submitted,

Professional Service Industries, Inc.

Paul H. Anderson, P.E. Senior Engineer Florida License No. 55135

March Folic/ photo

Marci L. Forbes, P.E. Branch Manager Florida License No. 60877

Attachments: Soil Laboratory Data Sheets - North and South Holding Pond Samples











ENVIRONMENTAL SERVICES REPORT

For the

FORMER LIME PONDS NORTH OF PINEBROOK PARK VENICE, SARASOTA COUNTY, FLORIDA

Prepared for

CITY OF VENICE UTILITIES DEPARTMENT 401 WEST VENICE AVENUE VENICE, FLORIDA 34285

Prepared by

PROFESSIONAL SERVICE INDUSTRIES, INC. 5801 BENJAMIN CENTER DRIVE, SUITE 112 TAMPA, FLORIDA 33634 TELEPHONE (813) 886-1075

PSI PROJECT NO. 552-4G029

April 12, 2004



· PUELETER DATE HP2/04 MIDICATED TEMPTING ACTOR SCHOOD BATE REFERED TO THE WELLING PALL LIME HOPS

Michael J. Bair Project Manager

David A. Stedje, P.G., CHMM Senior Technical Professional



April 12, 2004

City of Venice Utilities Department 401 West Venice Avenue Venice, Florida 34285

Attn: R. Christopher Sharek, P.E. Assistant Utility Director

Re: Environmental Services Report Former Lime Ponds North of Pinebrook Park Venice, Sarasota County, Florida` PSI Project No. 552-4G029

Dear Mr. Sharek:

In accordance with our agreement dated February 23, 2004, Professional Service Industries, Inc. (PSI) has completed the environmental services at the abovereferenced property. Please find four copies of the final report enclosed.

Thank you for choosing PSI as your consultant for this important project. If you have any questions, or if we can be of additional service in the future, please contact the undersigned at (813) 886-1075.

Respectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Michael J. Bair Project Manager

P: 552-Env/2004/G-Reports 04/4G029/report.doc

Enclosures

TABLE OF CONTENTS

1.0	INTRODUCTION1	I
	1.1 AUTHORIZATION	l
	1.2 SITE DESCRIPTION.	l
	1.3 PROJECT BACKGROUND	1
	1.4 PURPOSE AND SCOPE	2
2.0	ASSESSMENT ACTIVITIES	2
	2.1 LITHOLOGIC EVALUATION	2
	2.2 SOIL TESTING	3
	2.3 INVESTIGATION DERIVED WASTES	3
		-
3.0	DATA ANALYSIS & INTERPRETATION	3
0.0	3.1. LITHOLOGIC EVALUATION	3
	3.2 LABORATORY ANALYTICAL RESULTS	4
		•
4 N	CONCLUSIONS	5
7.0		5
	4.7 LABORATORY TESTING	5
		-
		6
5.0		6
		6
	D.Z USE BY INIKU PARTIES	U

LIST OF APPENDICES

APPENDIX A - FIGURES

APPENDIX B - TABLE

APPENDIX C - SOIL BORING LOGS

APPENDIX D - LABORATORY ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY RECORDS



April 12, 2004 Page 1 of 7

1.0 INTRODUCTION

Professional Service Industries, Inc. (PSI) conducted environmental services at the Former Lime Ponds (hereinafter "subject property") located in the vicinity of Pinebrook Park in Venice, Florida. The purpose of the project was to develop information with respect to the environmental quality of the material within each pond, to evaluate whether hazardous substances or petroleum products are present under conditions indicating an impact to the subject property, and to evaluate the thickness of the material. This report documents the scope of work, field investigation activities, laboratory analyses, and evaluation of data with respect to the environmental conditions assessed. Equipment decontamination, sample collection, field documentation, sample custody, and laboratory analyses were conducted in general accordance with methods prescribed by the Florida Department of Environmental Protection (Standard Operating Procedure DEP-SOP-001/01).

1.1 AUTHORIZATION

Authorization to perform the assessment was given on February 26, 2003 by a *Notice to Proceed*, issued by the City of Venice Utilities Department (account # 421-1203-533-31.00). A formal Purchase Order (P.O. No. 30680) was issued on March 2, 2004. The scope of work for this project is outlined in PSI Proposal No. 552-G4035, dated February 23, 2004. Mr. Chris Sharek, Assistant Utility Director with the City of Venice, provided access to the property.

1.2 SITE DESCRIPTION

The subject property is located north of Pinebrook Park and east of Pinebrook Road in Venice, Sarasota County, Florida. The property is located within a predominantly residential setting. Figure 1, Appendix A illustrates the general location of the subject property as referenced on the "Venice, Florida" USGS quadrangle map (1973, photorevised 1987).

The subject property consists of two former lime ponds (north pond and south pond). Earth berms, dense vegetation, and chain-link fencing surround both ponds. Access was provided to the study area through a gate in the fencing along the west side of the site. Figure 2, Appendix A illustrates the site layout.

1.3 PROJECT BACKGROUND

The City of Venice has been operating a lime softening water treatment plant since about 1954. The byproduct of this process has been stockpiled at the subject property in the lime ponds since that time, which historically was a common waste handling practice for this type of material. These ponds were being used and monitored until late 1990, at which time the lime softening plant was taken out of service.



April 12, 2004 Page 2 of 7

PSI performed environmental services at the subject property and issued a report dated June 22, 1995. The scope of work included two soil borings for lithology evaluation and the collection of two samples for laboratory analysis. The results of the 1995 investigation were generally in agreement with those for the current study. The conclusions of the 1995 report indicated that the laboratory analytical results were below detection limits for all parameters specified in EPA Method 8020, EPA Method 8260, and the full TCLP List with the exception of barium. The concentration of barium in both samples was below the maximum allowable "clean soil" concentration specified in Chapter 62-775, Florida Administrative Code (the most relevant guidance document at the time of the investigation). The material at the tested locations in 1995 was classified as non-hazardous waste.

1.4 PURPOSE AND SCOPE

The purpose of this project was to develop information regarding the environmental quality and thickness of the material within the two former lime ponds. PSI relied upon client-supplied background information and recommendations from PSI to develop the scope of work for this investigation. The general scope of the investigation consisted of the following activities: soil borings, laboratory testing, data analysis and interpretation, and report preparation.

The project was completed in general accordance with the authorized scope of work.

2.0 ASSESSMENT ACTIVITIES

Field investigation and sampling activities were conducted on March 3, 2004, under the supervision of Mr. Michael J. Bair, Project Manager for PSI. Mr. David A. Stedje, P.G., CHMM served as the Senior Technical Professional for this project.

Drilling of soil borings were performed by PSI using hand augers and a track-mounted drill rig. Upon completion of the investigation, all soil borings were abandoned using native material from the boring. Soil samples were submitted to Severn Trent Laboratories (STL) in Tampa, Florida under chain-of-custody documentation for analysis.

2.1 LITHOLOGIC EVALUATION

Eight borings (labeled as boring B-1 through B-8) were performed at the subject property as illustrated on Figure 2, Appendix A. The borings were performed to evaluate the thickness of material within each pond. At each boring location, samples were collected and described from land surface until native material was encountered. Lithologic logs are presented in Appendix C.



April 12, 2004 Page 3 of 7

2.2 SOIL TESTING

At borings B-2 (labeled as B-2A), B-3, B-6, and B-8, samples were retained for laboratory analysis. The samples were collected from land surface to one-foot below land surface (composite) at B-2A and B-8, from 2.5 feet (discrete) at B-3, and from 6 feet (discrete) at B-6. Each sample was collected from within the lime material for laboratory analysis of volatile organic compounds by EPA Method 8260, semi-volatile organic compounds by EPA Method 8270, organochlorine pesticides by EPA Method 8081, polychlorinated biphenyls (PCBs) by EPA Method 8082, organophosphorus pesticides by EPA Method 8141, chlorinated herbicides by EPA Method 8151, the RCRA eight metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) and aluminum by EPA Methods 6010/7471, and pH.

2.3 INVESTIGATION DERIVED WASTES

Investigation-derived waste was not generated as part of this project. Excess soil samples were returned to the originating borehole. All disposable sampling supplies and equipment was removed from the study area at the conclusion of the investigation.

3.0 DATA ANALYSIS & INTERPRETATION

The results of the field investigation and laboratory analyses are presented in the following sections. Where appropriate, the results are compared with regulatory limits of Chapter 62-777, Florida Administrative Code (F.A.C.) for the chemicals and compounds identified in the applicable media. Complete copies of the laboratory analytical reports are included as Appendix D of this report.

3.1 LITHOLOGIC EVALUATION

The borings were completed to evaluate the thickness of the lime material in each pond. Four borings were performed in each pond. The material began at land surface and varied in thickness. At land surface to the water table interface, the material was generally dry and unconsolidated. Below the water table, the material consisted of an unconsolidated slurry. The lime material was underlain by native material consisting of very organic fine-grained sand. Because the topography in the study area varied significantly, the depth-to-groundwater ranged from 1 to 6 feet below land surface in the borings. No significant stormwater impoundments were noted in the study area.

In the north pond (borings B-5 through B-8), the lime material ranged from 6 to 8 feet in thickness. In the south pond (borings B-1 through B-4), the lime material ranged from 2.5 to 6 feet in thickness. Fence diagrams for each pond are presented as Figures 3 and 4, Appendix A.



April 12, 2004 Page 4 of 7

3.2 LABORATORY ANALYTICAL RESULTS

Four samples were collected for laboratory analysis from the lime material within each pond (two samples from each pond). The laboratory analytical results (detected analytes only) are summarized on Table 1, Appendix B. As noted, several analytes were detected above the laboratory method detection limits. However, only arsenic at boring B-8 (southeast corner of north pond) was detected above the Residential Direct Exposure Soil Cleanup Target Level of Chapter 62-777, Florida Administrative Code. No other tested analytes were detected above the Residential Direct Exposure or Leachability-based Soil Cleanup Target Level of Chapter 62-777, Florida Administrative Code. The laboratory analytical reports are presented as Appendix D.
Former Lime Ponds PSI Project No. 552-4G029

April 12, 2004 Page 5 of 7

4.0 CONCLUSIONS

PSI has performed environmental services in general conformance with the scope and limitations of PSI Proposal No. 552-G4035 for the Two Former Lime Ponds in Venice, Florida. Any exceptions to or deletions from the work scope are discussed earlier in this report. Based on an evaluation of the findings of this assessment, the following conclusions have been developed.

4.1 LITHOLOGY

- The lime material varied in depth across the study area. In general, the thickness of the material was no less than 2.5 feet and no greater than 8 feet.
- The lime material was underlain by native material consisting of very organic, fine-grained sand.

4.2 LABORATORY TESTING

- Four samples were collected for laboratory analysis of volatile organic compounds by EPA Method 8260, semi-volatile organic compounds by EPA Method 8270, organochlorine pesticides by EPA Method 8081, polychlorinated biphenyls (PCBs) by EPA Method 8082, organophosphorus pesticides by EPA Method 8141, chlorinated herbicides by EPA Method 8151, the RCRA eight metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver) and aluminum by EPA Methods 6010/7471, and pH.
 - No target analytes were detected above the Soil Cleanup Target Levels of Chapter 62-777, Florida Administrative Code, except for arsenic at boring B-8. The State of Florida Environmental Resource Commission is currently evaluating a proposal by the Florida Department of Environmental Protection to raise the Residential Direct Exposure Soil Cleanup Target Level for arsenic based on recent bioavailability studies. The studies indicate the bioavailability of arsenic is considerably lower than originally estimated in Chapter 62-777, Florida Administrative Code. It appears likely that the Residential Direct Exposure Soil Cleanup Target Level for arsenic will be raised to a concentration above 2 mg/kg in the near future.



Former Lime Ponds PSI Project No. 552-4G029 April 12, 2004 Page 6 of 7

5.0 WARRANTY

5.1 WARRANTY

PSI warrants that the findings and conclusions reported herein were conducted in general accordance with ASTM Standard E 1903-97 protocol. These methodologies are described by the standard guide as representing good commercial and customary practice for conducting an Environmental Assessment of a parcel of property for the purpose of evaluating environmental conditions. However, these findings and conclusions contain all of the limitations inherent in these methodologies which are referred to in the standard guide and some of which are more specifically set forth below.

The Environmental Assessment has been developed to provide the client with information regarding apparent indications of environmental conditions relating to the subject property. It is necessarily limited to the conditions observed and to the information available at the time of the work. The assessment and conclusions presented herein were based upon the subjective evaluation of limited data. They may not represent all conditions at the subject site as they reflect the information gathered from specific locations. PSI warrants that the findings and conclusions contained herein have been promulgated in accordance with generally accepted environmental investigation methodology and only for the site described in this report.

Due to the limited nature of the work, there is a possibility that there may exist conditions which could not be identified within the scope of the assessment or which were not apparent at the time of report preparation. It is also possible that the testing methods employed at the time of the report may later be superseded by other methods. The description, type, and composition of what are commonly referred to as "hazardous materials or conditions" can also change over time. PSI does not accept responsibility for changes in the state of the art, nor for changes in the scope of various lists of hazardous materials or conditions. PSI believes that the findings and conclusions provided in this report are reasonable. However, no other warranties are implied or expressed.

5.2 USE BY THIRD PARTIES

This report was prepared pursuant to the contract PSI has with the City of Venice. That contractual relationship included an exchange of information about the subject site that was unique and between PSI and its client and serves as the basis upon which this report was prepared. Because of the importance of the communication between PSI and its client, reliance or any use of this report by anyone other than the City of Venice, for whom it was prepared, is prohibited and therefore not foreseeable to PSI.



Former Lime Ponds PSI Project No. 552-4G029

April 12, 2004 Page 7 of 7

Reliance or use by any such third party without explicit authorization in the report does not make said third party a third party beneficiary to PSI's contract with the City of Venice. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at third party's risk. For the same reasons, no warranties or representations, expressed or implied in this report, are made to any such third party.

Third party reliance letters may be issued on request and payment of the, then current fee for such letters. All third parties relying on PSI's reports, by such reliance, agree to be bound by the proposal and PSI's General Conditions. No reliance by any party is permitted without such agreement, regardless of the content of the reliance letter itself.

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APPENDIX A - FIGURES

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APPENDIX B -

TABLE

TABLE 1: SOIL ANALYTICAL RESULTS (detected analytes only)

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Two Former Lime Ponds Pinebrook Park, Venice, Sarasota County

552-4G029

naphthalene 2-Methylug/kg dw 110 (I) 280 (I) 80,000 <100 100 6,100 8270 å ethylhexyl) phthalate ug/kg dw 76,000 280 (I) 430 (I) bis (2-8270 94 (I) <87 780,000 Acetone ug/kg dw <8.5 8260 0.6> ¢8,0 57 Methytene chloride ug/kg dw 16,000 4.3 (I) 8260 <3.5 53.5 **3.3 4.2** Analyte, Method, Units, and Concentration 9045 units 10.2 9.5 9.2 F 9.4 \$ 0.0089 (I) 0.0069 (1) 0.0076 (I) 0.021 (I) Mercury mg/kg dw 7471 3.4 Chromium mg/kg dw 2.7 (I) 6010 210 3.7 32 3.1 Barium mg/kg dw 6010 110 40 33 4 31 mg/kg dw Arsenic 0.73 (I) 1.2 (1) 0.62 (I) <0.52 6010 0.8 Aluminum mg/kg dw 72,000 2,600 7,400 2,300 3,500 6010 Aroclorug/kg dw 1254 8082 4<u>1</u>0 500 45 ²8 26 Methoxychlor 370,000 2.2 (IP) ug/kg dw <0.98 <0.94 <1.6 < 8081 Dieldrin ig/kg dw 2.3 (IP) <0.46 ≤0.44 <0.77 8081 2 03-11-2004 / 1130 03-11-2004 / 1220 03-11-2004 / 1510 03-11-2004 / 1450 Date / Time Chapter 62-777, RDE Sample B-2A ц ц φ M <u>8</u> ݠ

NOTES:

Chapter 62-777, Leachability

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y/kg = micrograms per kilogram

g/kg = miligrams per kilogram

DDE = Residential Direct Exposure

i = the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit

of the target analyte in the sample, relative percent difference is >40%. Thus, viewer discretion should be employed during data review and interpretation = identification of target analytes using GC methodology is based on relention time. Although two dissimilar GC solumns confirmed the presence

of results for this rarget compound

··· Derived using the Sythetic Precipitation Leaching Procedure (SPLP) to calculate site-specific value FCLP standard is for total PCB's, which is a sum of all the Aroctor mixtures
no standard for this analyte, test is informational only

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APPENDIX C - LITHOLOGIC LOGS

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PREPARED BY: Michael Bair

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PREPARED BY: Michael Bair

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21112-2	B-3				Solid	03/12/04	03/11/04 12:20	
21112-3	B-6	ing the second sec			Solid	03/12/04	03/11/04 14:50	•
21112-4	B-8				Solid	03/12/04	03/11/04 15:10	
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Volatilor	hy CC/MS (8250)				<u></u>		·····	-
VOIACTIES		,				·		
Benzene		ug/kg dw	4.20	4.00	5.0)	3.80 '	
Bromobenzene		ug/kg dw	3.00	2.80	3.6	}	2.70	
Bromoch loromet	hane	ug/kg dw	3.0U	2.80	3.6]	2.70	
Bromodichloron	ethane	ug/kg dw	2.20	2.10	2.6	J	2.00	
Bromoform		ug/kg dw	2.00	1.90	2.4)	1.80	
Bromomethane ((Methyl bromide)	ug/kg dw	9.00	8.50	110		8.00	
n-Butylbenzene	2 .	ug/kg dw	5.20	5.00	6.2	J	4.70	
sec-Butylbenze	ene	ug/kg dw	6.00	5.70	7.1	ļ	5.30	
tert-Butylben	zene	ug/kg dw	5.00	4.7U	5.9	U	4.40	
Carbon tetrad	hloride	ug/kg dw	4.80	4.50	5,6	U	4.20	
Chlorobenzene		ug/kg dw	3.20	3.10	3.8	U [.]	2.90	
Chloroethane		ug/kg dw	5.50	5.20	6.5	0	4.90	
Chloroform		ug/kg dw	4.20	4.00	5.0	U 	3.80	
Chloromethane		ug/kg dw	3.20	3.10	3.8	0	2.90	
2-Chlorotolue	ne	ug/kg dw	2.50	2.40	3.0	U ·	2.20	
4-Chlorotolue	ne	ug/kg dw	3.00	2.80	3.6	U 	2.70	
Dibramochloro	methane	ug/kg dw	2.10	2.00	2.5	U 	1.90	
1,2-Dibromo-3	-chloropropane	ug/kg dw	1.50	1.40	1.8	U	1.40	
1,2-Dibromoet	hane (EDB)	ug/kg dw	2.20	2.00	2.5	U ta ta	1.90	
Dibromomethan	e	ug/kg dw	-2,30	2.20	2.8	iU	2.10	
1,2-Dichlorot	penzene	ug/kg dw	2.80	2.60	3.3	NU	2.40	
1,3-Dichlorob	penzene	ug/kg dw	3.20	3.10	3.8	SU	2.90	
1,4-Dichlorob	benzene	ug/kg dw	3.50	3.30	4.7	20	3.10	
Dichlorodiflu	oromethane	ug/kg dw	6.00	5.7U	7.1	U	5.30	
1,1-Dichloro	ethane	ug/kg dw	4.0U	3.80	4.7	70	3.60	
1,2-Dichloro	ethane	ug/kg dw	3.00	2.80	3.0	5U	2.7U	
1.1-Dichloro	ethene	ug/kg dw	5.50	5.20	6.	50	4.90	

Page 3 of 43



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STL Tampa	6712 B	enjamin Road,	Suite 100 -	Tampa FL 3363	4 Telephon	e:(813) 885-7	427 Fax:(813) 8	85-7049
· · · ·			Analytic	al Data Report				
Lab Sample ID	Description				Matrix	Date Received	Date Sampled	SDG#
21112-1	B-2A				Solid	03/12/04	03/11/04 11:30	
21112-2	B-3				Solid	03/12/04	03/11/04 12:20	
21112-3	B-6			1	Solid	03/12/04	03/11/04 14:50	
21112-4	B-8				Solid	03/12/04	03/11/04 15:10	
			Lab	Sample IDs	· · ·			
Parameter		Units	21112-1	21112-2	21112	?-3 211	.12-4	
Volatiles	by CC/MS (8260))			<u> </u>	, <u> </u>		
cis-1,2-Dichlo	proethene	ug/kg dw	4.2U	4.00	5.00	3.8	3I ⁴	
trans-1,2-Dich	loroethene	ug/kg dw	4.8U	4.5U	5.60	4.7	11	
1,2-Dichloropr	opane	ug/kg dw	3.50	3.30	4.20	3.1		
1,3-Dichloropr	opane	ug/kg dw	4.0U	3.80	4.70	3.6		
2,2-Dichloropr	opane	ug/kg dw	5.00	4.70	5.90	4.4	u)	
1,1-Dichloropr	ropylene	ug/kg dw	5.00	4.70	5.90	4.4	4)	
cis-1,3-Dichlo	propropene	ug/kg dw	2.50	2.30	2.90	2.7	20	
trans-1,3-Dich	nloropropene	ug/kg dw	5.20	5.00	6.20	4.7	10 70	
Ethylbenzene		ug/kg dw	5.00	4.7U	5.90	4.4	- -	
Hexach1orobuta	adiene	ug/kg dw	3.50	3.30	4.20	3.1	U .	
Isopropy lbenze	ene	ug/kg dw	9.50	9.00	110	8.4		
p-Cymene		ug/kg dw	3.50	3.30	4.20	3.1	U	
Methylene chlo	oride							
(Dichloromet	thane)	ug/kg dw	3.50	3.3U	4.20	4.3	BI	
Naphthalene		ug/kg dw	1.4U	1.3U	1.70	1.	30	
n-Propylbenze	ne	ug/kg dw	4.20	4.00	5.00	3,8	BU	
Styrene		ug/kg dw	4.5U	4.20	5.30	4.0)U	
1,1,1,2-Tetra	chloroethane	ug/kg dw	3.20	3.10	3.8U	2.9	ĴŬ	
1,1,2,2-Tetra	chloroethane	ug/kg dw	2.50	2.40	3.00	. 2.	20	and the second
Tetrachloroet	hene	ug/kg dw	7.50	7.11	8.90	6.7	70	
Toluene		ug/kg dw	4.5U	4.2U	5.30	4.0	и И	
1,2,3-Trichlo	robenzene	ug/kg dw	2.40	2.30	2.80	2.	LU	
1,2,4-Trichlo	robenzene	ug/kg dw	2,50	2.40	3.00	2.2	20	
1,1,1-Trichlo	roethane	ug/kg dw	5.20	5.00	6.20	4.1	7U	
1,1,2-Trichlo	roethane	ug/kg dw	2.40	2,30	2.80	2.	IU	
Trichloroethe	ne	ug/kg dw	5.20	5.00	6.20	4.7	7U	
Trichlorofluo	romethane	ug/kg dw	7,00	6.60	8.30	. 6.2	20	

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STL Tampa	6712 B	enjamin Road,	Suite 100 - Ta	ampa FL 33634	Telephor	le:(813) 88	5-7427 Fax:	(813) 88	35-7049
			Analytical	Data Report			•••		
Lab Sample ID	Description				Matrix	Date Recei	ived Date Sa	mpled	SDG#
21112-1	B-2A			·····	Solid	03/12/04	03/11/0	4 11:30	
21112-2	B-3		1		Solid	03/12/04	03/11/0	4 12:20	
21112-3	B-6				Solid	03/12/04	03/11/0	4 14:50	
21112-4	B-8				Solid	03/12/04	03/11/0	4 15:10	
			Lab Si	ample IDs					
Parameter		Units	21112-1	21112-2	2111	2-3	21112-4		
Volatile	s by GC/MS (8260	0)						<u> </u>	
1,2,3-Trichlo	ropropane	ug/kg dw	2.50	2.4U	3.00		2.20	1	
1,2,4-Trimeth	ylbenzene	ug/kg dw	2.50	2.40	3.00	I	2.20	•	
1,3,5-Trimeth	ylbenzene	ug/kg dw	3.00	2,80	3.60	}	2.70		
Vinyl chlorid	ie	ug/kg dw	3.80	3.50	4.4	ľ -	3.30		
o-Xylene		ug/kg dw	4.0U	3.80	4.7	I	3.60		
m&p-Xylene		ug/kg dw	7.50	7.10	8.9	1	6.70		
Acetone		ug/kg dw	9.00	8.5U	57		8.00		
2-Butanone (ÆK)	ug/kg dw	8.20	7.80	9.8)	7. 3U		
4-Methy1-2-p	entanone (MIBK)	ug/kg dw	120	120	14U		110		
Carbon disul	fide	ug/kg dw	5.50	5.20	6.5	J	4.90		
2-Hexanone		ug/kg dw	120	110	14 U		110		
Methyl t-but	yl ether (MTBE)	ug/kg dw	3.00	2,80	3.6	J	2.70		
Surrogate -	Toluene-d8 *	%	82 %	81 %	80 5	6	81 %		
Surrogate -									
4-Bromoflu	orobenzene *	%	83 %	83 %	80 5	К	86 %		
Surrogate -									
Dibromoflu	oromethane *	%	83 %	83 %	87 :	%	86 %		
Percent Soli	ds		54	50	31		52		
Dilution Fac	tor	· · · · ·	1	1	···· 1 -		1	. •• *	• • • •
Analysis Dat	e,		03/19/04	03/19/04	03/	19/04	03/19/04		
Batch TD			0319F(A)	0319F(A)	031	9E(A)	0319E(A)		

Page 5 of 43



STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

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Analytical Data Report

Lab Sample ID	Description				Matrix	Date Received	l Date Sampled	SDG#
21112-1	B-2A				Solid	03/12/04	03/11/04 11:30	<u></u>
21112-2	B-3				Solid	03/12/04	03/11/04 12:20	
21112-3	B-6			· · · · · ·	Solid	03/12/04	03/11/04 14:50	
21112-4	B-8				Solid	03/12/04	03/11/04 15:10	
			Lab	Sample IDs			••••	· .
Parameter		Units	21112-1	21112-2	2111	2-3 21	112-4	
Semivola	tile Organics (82	270)	·					
1,3-Dichlorob	enzene	ug/kg dw	57U	62U	1000	60	، ر	
1,4-Dichlorob	ènzene	ug/kg dw	50U	54U	870	52	-	
Hexachloroeth	ane	ug/kg dw	44U	48 U	77U	46	j	
bis(2-Chlorœ	thyl)ether	ug/kg dw	48U	52U	84U	50]	
1,2-Dichlorob	enzene	ug/kg dw	44U	48U	77U	46	J	
2,2'-0xybis(1	-chloropropane)[i	2						
is(2-Chloro	isopropy])ether]	ug/kg dw	610	66U	110	J 64	J	
n-Nitrosodi-n	-propylamine	ug/kg dw	590	64U	1000	J 62	J	
Nitrobenzene		ug/kg dw	500	54U	87U	52	J	
Hexach1orobut	adiene	ug/kg dw	420	46U	74U	44	U	
1,2,4-Trichlo	robenzene	ug/kg dw	410	44U	71U	42	J	
Isophorone		ug/kg dw	480	520	84U	50	U	
Naphthalene		ug/kg dw	140I	310I	80U	48	U	
bis(2-Chloroe	thoxy)methane	ug/kg dw	540	58U	93U	56	U .	
Hexachlorocyc	lopentadiene	ug/kg dw	940	1000	1601	J 98	U	
2-Chloronapht	halene	ug/kg dw	440	48U	77U	46	IJ	
Acenaphthy]er	ie .	ug/kg dw	390	42U	68U	40	U	
Acenaphthene		ug/kg dw	540	580	93U	56	บ	
Dimethylphtha	alate	ug/kg dy	460	50U		48	U	,
2,6-Dinitroto	oluene	ug/kg dw	i 54U	58U	9 3U	56	U	
Fluorene		iug/kg dv	r 57U	62U	1000	J 60	U	
4-Chloropheny	/lphenyl ether	ug/kg dv	<i>i</i> 52U	56U	90U	54	U	
2,4-Dinitroto	oluene	ug/kg dv	<i>i</i> 74U	800	130	J 77	U	
Diethylphthal	late	ug/kg dv	r 590	64U	1000	J .62	U	
N-Nitrosodip	nenylamine	ug/kg dv	r 46U	50U	80U	48	U	
Hexachlorober	zene	ug/kg dv	r 83U	90U	140	j 87	U	
4-Bromopheny	lphenyl ether	ug/kg dv	v 44U	48U	77U	46	U	



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	•		Andlycica	i Data Report			••	
ab Sampile ID 🛛	escription				Matrix	Date Rece	ived Date Sampled	SDG#
21112-1	3-2A			. ·	Solid	03/12/04	03/11/04 11:30	
1112-2	3-3				Solid	03/12/04	03/11/04 12:20	
21112-3	3-6				Solid	03/12/04	03/11/04 14:50	
2 <u>1112</u> -4 I	8-8				Solid	03/12/04	03/11/04 15:10	
			Lab S	Sample IDs				
Parameter		Units	21112-1	21112-2	211	12-3	21112-4	
Semivolati	le Organics (8270)		<u> </u>				
Phenanthrene		ug/kg dw	310	34U	550		330 '	
Anthracene		ug/kg dw	39U	42U	68 U		400	
Di-n-butylphtha	late	ug/kg dw	520	560	900		54U	
Fluoranthene		ug/kg dw	57U	620	100	U	60U	
Pyrene		ug/kg dw	1200	1200	200	U	1200	
Butylbenzylpht	nalate	. ug/kg dw	78U	84U	140	U	810	
bis(2-Ethylhexy	/l)phthalate	ug/kg dw	94I	2801	430	I	87U	
Chrysene		ug/kg dw	390	420	680		400	
Benzo(a)anthra	cene	ug/kg dw	37U	40U	64U	l	38U	
3,3'-Dichlorob	enzidine	ug/kg dw	2800	300U	480	U	2900	
Di-n-octylphth	alate	ug/kg dw	1000	1100	170	U	1000	
Benzo(b)fluora	nthene	ug/kg dw	42U	46U	74) ⁻	44U	
Benzo(k)fluora	nthene	ug/kg dw	48U	52U	841	J	500	
Benzo(a)pyrene		ug/kg dw	54U	580	93(J	560	
Indeno(1,2,3-c	d)pyrene	ug/kg dw	120U	1300	220	N N	1300	
Dibenzo(a,h)an	thracene	ug/kg dw	960	1000	170	U	1000	
Benzo(g,h,i)pe	rylene	ug/kg dw	48U	52U	841	J	50U	
N-Nitrosodimet	hylamine	ug/kg dw	910	98U	16		940	
2-Chlorophenol		ug/kg dw	- 59 U · ·	64U	10	.	620	· ·
2-Nitrophenol		ug/kg dw	350	380	61	J	360	
Phenol		ug/kg dw	78U	84U	14	UU	81U	
2,4-Dimethylph	nenol	ug/kg dw	52U	56U	90	U	54U	
2,4-Dichloropi	nenol	ug/kg dw	570	62U	10	UO	60U	
2,4,6-Trichlo	rophenol	ug/kg dw	37U	40U	64	U.	380	
4-Chloro-3-met	thylphenol	ug/kg dw	91U	980	16	00	94U	
2.4-Dinitroph	enol	ug/ka dw	280U	300U	48	ou	2900	
2 Mathul A G	dinitronhenol	ua/ka dw	37011	1001	64	011	38011	

Page 7 of 43

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		Analytical	l Data Report			•	
ab Sample ID Description				Matrix	Date Received	Date Sampled	SDG#
21112-1 B-2A				Solid	03/12/04	03/11/04 11:30	·····
21112-2 B-3				Solid	03/12/04	03/11/04 12:20	
21112-3 B-6				Solid	03/12/04	03/11/04 14:50	· · ·
211124 B-8				Solid	03/12/04	03/11/04 15:10	
		Lab Si	ample IDs			,	
Parameter	Units	21112-1	21112-2	21112	2-3 211	12-4	
Semivolatile Organics (82	270)			<u>,</u>	<u></u>		<u></u>
Pentachlorophenol	ug/kg dw	3300	3600	5800	350	0	
4-Nitrophenol	ug/kg dw	300U	3200	520U	310	e N	
Benzyl alcohol	ug/kg dw	560	600	970	58	- 	
2-Methylphenol (o-Cresol)	ug/kg dw	59U	64U	1000	620	1	
3-Methylphenol/4-Methylphenol							
(m&p-Cresol)	ug/kg dw	78 U	84U	140U	811	I	
Benzoic acid	ug/kg dw	1100	1200	2000	120	U	
4-Chloroaniline	ug/kg dw	68U	74U	1200	711	 J	
2-MethyInaphthalene	ug/kg dw	1101	2801	1000	621	1	
2,4,5-Trichlorophenol	ug/kg dw	540	58U	93U	56	r	
2-Nitroaniline	ug/kg dw	780	84U	1400	811		
3-Nitroaniline	ug/kg dw	590	64U	1000	621)	
Dibenzofuran	ug/kg dw	560	600	970	58	, J	
4-Nitroaniline	ug/kg dw	78U	84U	1400	811	J	
Surrogate - 2-Fluorophenol *	%	90 %	88 %	66 %	. 75	%	
Surrogate - Phenol-d5 *	%	95 %	97 %	77 %	80	%	
Surrogate - Nitrobenzene - d5							
*	%	97 %	97 %	72 %	78	%	
Surrogate - 2-Fluorobiphenyl	*% •••• ** .	97 %	97 %	- 68 %	81	%	. •
Surrogate -					-		
2,4,6-Tribromophenol *	%	90 %	100 %	63 %	83	%	
Surrogate - Terphenyl-d14 *	%	110 %	118 %	87 %	94	%	
Percent Solids		54	50	31	52		
Dilution Factor		1	1	1	1		
Prep Date		03/17/04	03/17/04	03/13	7/04 03	/17/04	
Analysis Date		03/18/04	03/18/04	03/1	8/04 03	/18/04	
Batch ID		03174	02174	0.017	-, -, -, -, -, -, -, -, -, -, -, -, -, -		

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			Analytica	1 Data Report			۰.		
lab Sample ID	Description		4		Matrix	Date Rece	ived	Date Sampled	SDC#
21112-1	B-2A				Solid	03/12/04		03/11/04 11:30	
21112-2	B-3				Solid	03/12/04		03/11/04 12:20	
21112-3	B-6				Solid	03/12/04		03/11/04 14:50	2
211 12-4	B-8				Solid	03/12/04		03/11/04 15:10	
			Lab S	ample IDs	• •				
Parameter		Units	21112-1	21112-2	2111	2-3	2111	2-4	
Cl-Pestic	ides (8081)								
Aldrin		ua/ka dw	0.280	0.300	0.48	1	0.29	11 (
alpha-BHC		ug/kg dw	0.240	0.260	0.42	1	0.25		
beta-BHC		ug/kg dw	1.10	1.20	2.00		1.2		
gamma-BHC (Lin	idane)	ua/ka dw	1.00	1.10	1.80		1 11	l	
delta-BHC	-	ug/kg dw	0.150	. 0.17U	0.27	U	0.16	31	
Chlordane (tec	chnical)	ug/kg dw	6.3U	6.80	110	-	6.5	-	
4,4'-DDD		ug/kg dw	0.650	0.700	1.10		0.67	บ	
4,4'-DDE		ug/kg dw	0.44U	0.480	0.77	U	0.46	Ū	
4,4'-DDT		ug/kg dw	0.65U	0.700	1.10		0.67	บ	
Dieldrin		ug/kg dw	0.44U	2.3IP	0.77	U	0.46	U	
Endosulfan I		ug/kg dw	0.260	0.280	0.45	U	0.27	บ	
Endosulfan II		ug/kg dw	0.800	0.86U	1.40		0,83	U	
Endosulfan sul	Ifate	ug/kg dw	0.810	0.880	1.40		0.85	iu .	
Endrin		ug/kg dw	0.78U	0.84U	1.40		0.83	ມ	
Endrin aldehyd	de	ug/kg dw	0.440	0.48U	0.77	U	0.46	ม	
Heptachlor		ug/kg dw	0.370	0.40U	0.64	บ	0.38	ม	
Heptachlor ep	oxide	ug/kg dw	0.220	0.24U	0.39	U	0.23	บ	
Methoxychlor		ug/kg dw	0.940	2.2IP	1.60	ļ	0.9	SU	
Toxaphene		ug/kg dw	61U	66U ····	1100) - 191 - 1	· 64U	e en la servició de l	••.
Surrogate -								•	
2,4,5,6-Tet	rachloro-m-xylen	e							
(TCMX) *		%	41 %	54 %	48 %	5	48 9	6	
Surrogate -									
Decachlorob	iphenyl (DCB) *	%	58 %	68 %	62 %	5	62 9	6	
Percent Solid	S		54	50	31		52		
Dilution Fact	or		1	1	1		1		
Prep Date			03/15/04	03/15/04	03/1	5/04	03/	15/04	
Analysis Date	· ·		03/16/04	03/16/04	03/1	6/04	03/	16/04	
Batch ID	•		0315T	0315T	0315	т	031	57	

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STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

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Analytical Data Report

Lab Sample ID Description				Matrix	Date Receiv	ed Date Sampled	SDG#
				Solid	03/12/04	03/11/04 11:30	
21112-2. B-3				Solid	03/12/04	03/11/04 12:20	
21112-3 B-6				Solid	03/12/04	03/11/04 14:50	
21112-4 B-8				Solid	03/12/04	03/11/04 15:10	
		Lab Sar	ple IDs		,		
Parameter	Units	21112-1	21112-2	2111	2-3 2	1112-4	•
PCB's (8082)							
Aroclor-1016	ug/kg dw	100	110	18 U	1	10 '	
Aroclor-1221	ug/kg dw	140	150	24U	1	150	
Aroclor-1232	ug/kg dw	6.50	7.00	110	(5.7U	
Aroclor-1242	ug/kg dw	120	130	210	:	L2U	
Aroclor-1248	ug/kg dw	110	120	190	:	L1U	
Aroclor-1254	ug/kg dw	150	76	260	:	160	,
Aroclor-1260	ug/kg dw	150	1 6U	260	:	150	
Surrogate - TOX *	%	38 %	52 %	46 9	% . •	45 %	
Surrogate - DCB *	%	45 %	52 %	48 5	% .	48 %	
Percent Solids		54	50	31		52	
Dilution Factor		1	1	1		1	
Prep Date		03/15/04	03/15/04	03/	15/04	03/15/04	
Analysis Date		03/16/04	03/16/04	03/	16/04	03/16/04	
Batch ID		03151	0315I	031	51	0315I	
Organophosphorus Pes	sticides (8141)						
Azinphos methyl	ug/kg dw	130	14U	230	I	13U	
Bolstar (Sulprofos)	ug/kg dw	100	110	180) – stra – t	100	• .•
Chlorpyrifos	ug/kg dw	8.00	8.60	14	}	8.20	
Coumaphos	ug/kg dw	160	170	271	J	16U	
Demeton	ug/kg dw	8.90	9.60	16)	9.20	
Diazinon	ug/kg dw	130	140	231	J	13U	
Dichlorvos	ug/kg dw	2 .4 U	2.60	4.7	20	2.50	
Dimethoate	ug/kg dw	280	30U	481	J	29U	
Disulfoton	ug/kg dw	4.8U	5.20	8.4	ŧU	5.00	
EPN	ua/ka dw	2011	2211	26	I Contraction of the second se	2111	



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·	Analytical Data Report											
Lab Sample 10 Descript	ion			Matrix	Date Received	i Date Sampled	SDG#					
21112-1 B-2A				Solid	03/12/04	03/11/04 11:30						
21112-2 B-3				Solid	03/12/04	03/11/04 12:20						
21112-3 B-6				Solid	03/12/04	03/11/04 14:50						
21112-4 B-8				Solid	03/12/04	03/11/04 15:10						
		1	Lab Sample IDs				· · ·					
Parameter	Units	21112-1	21112-2	21112	211	12-4						
Organophosphorus P	esticides (814)	IJ										
Ethoprop	ug/kg d	w 18U	190	31U	19	j '						
Fensulfothion	`ug/kg d	aw 120	13 U	20U	120	J						
Fenthion	ug/kg	dw 4.4U	4.8U	7.80	4.0	6U						
Malathion	ug/kg	dw 14U	150	24U	14	U						
Merphos	ug/kg (dw 18U	200	320	19	U						
Mevinphos	ug/kg (dw 7.0U	7.60	120	7.	30						
Mononcrotophos	ug/kg	dw 240U	260U	4200	25	OU						
Naled	ug/kg	dw 1.3U	140	220	13	U						
Ethyl Parathion	ug/kg	dw 12U	140	22 U	13	U						
Methyl parathion	ug/kg	dw 7.8U	8.4U	14U	8.	10						
Phorate	ug/kg	dw 4.4U	4.8U	7.8U	4.	6U						
Ronnel	ug/kg	dw 7.4U	8.00	13U	7.	7U						
Sulfotepp (Tetraethy)												
dithiopyrophosphate)	ug/kg	dw 140	150	25U	15	U						
Stirophos (Tetrachlorv	inphos) ug/kg	dw 100	110	170	10	U						
Tokuthion (Prothiofos)	ug/kg	dw 1.7U	180	290	17	บ						
Trichloronate	ug/kg	dw 6.7U	7.2U	12U	6.	90						
Surrogate -												
Triphenylphosphate *	···· %	52 %	93 %	85 %	S 89)%						
Percent Solids		54	50	31	52	<u>!</u>						
Dilution Factor		1	1	1	1							
Prep Date		03/16/	04 03/16/04	03/1	.6/04 03	3/16/04						
Analysis Date		03/23/	04 03/23/04	03/2	3/04 03	3/23/04						
Batch ID		03161	03161	0316		NI6T						

Page 11 of 43

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			Analytical	Data Report						
ab Sample ID	Description				Matrix	Date Rece	ived	Date Sampled	SDG#	
1112-1	B-2A	· · ·			Solid	03/12/04		03/11/04 11:30		-
1112-2	B-3				Solid	03/12/04		03/11/04 12:20		
1112-3	B-6				Solid	03/12/04		03/11/04 14:50		
1112-4	B-8				Solid	03/12/04		03/11/04 15:10		
			Lab S	ample TDs						
arameter		Units	21112-1	21112-2	2111	2-3	21112	-4		
Chlorinat	ed Herbicides	(8151)					<i>-</i>			
.4-D		ua/ka dw	3.00	3.21	5 21		2 10	4		
2,4-DB		ug/kg dw	120	130	2111		120			
2,4,5-T		ug/kg dw	1.90	2.01	3,20		1.01			
2,4,5-TP Silve	2X	ug/kg dw	1.70	1.80	2_0	•	1.70			
alapon		ug/kg dw	430	460	7411		4411			
) i camba		ug/kg dw	2.20	2.40	3.9	1	2.31			
Dichlorprop		ua/ka dw	5.00	5.40	8.71	•	5.20			
Dinoseb		ua/ka dw	150	1711	2711		161			
(4-Chloro-2-M	ethylphenoxy)-A	ce		2,0	210		100			
tic Acid		ua/ka dw	14000	15000	2400	41	14001	1		
2-(4-Chloro-2-	-Methylphenoxy)	-P		20000	2100		24000	,		
ropanoic Ac	id	ua/ka dw	7400	8000	1300	N I	77011			
Pentachloroph	enol	uq/kq dw	1.80	1.90	3,11	1	1.81			
Picloram		ug/kg dw	2.20	2.40	3.9	, 	2.30			
Surrogate-DCA	A *	%	38 %	38 %	34 9	6	34 %			
Percent Solid	s	-	54	50	31	-	52			
Dilution Fact	or		1	1	1		1			
Prep Date			03/22/04	03/22/04	03/2	2/04	03/22	2/04		
Analysis Date	n in the second se		03/23/04	03/23/04	03/2	23/04	03/2	3/04		
Batch ID			0322K	0322K	0322	2K	03221	K		
Metals (6010)									
Arsenic		mg/kg dw	0.621	0.731	0.5	20	1.2I			
Barium		mg/kg dw	31,	40	33		41			
Cadmium		mg/kg dw	0.160	0.17U	0.2	80	0.17	U		
Chromium		mg/kg dw	3.7	32	2.7	ſ	3.1			

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			Analytical	Data Report					
b Sample ID	Description				Matrix	Date Rece	rived Date Sampled	SDG#	
112-1	B-2A	••••••••••••••••••••••••••••••••••••••			Solid	03/12/04	03/11/04 11:30		
112-2	B-3				Solid	03/12/04	03/11/04 12:20		
112-3	B6			· .	Solid	03/12/04	03/11/04 14:50		
1112-4	B-8				Solid	03/12/04	03/11/04 15:10		
			lab Sar	mle IDs		· · · · · ·			•
arameter		Units	21112-1	21112-2	2111	2-3	21112-4		
Metals (6	5010)	, <u>, , , , , , , , , , , , , , , , , , </u>							_
ead		mg/kg dw	0.780	0.84U	1.4	J	0.810		
elenium		mg/kg dw	0.800	0.860	1.4	j •	0.830		
ilver		mg/kg dw	0.350	0.380	0.61	W	0.370		
ercent Solid	5		54	50	31		52		
ilution Facto	or		1	1	1		1		
rep Date			03/15/04	03/15/04	03/1	15/04	03/15/04		
nalysis Date			03/16/04	03/16/04	03/3	16/04	03/16/04		
atch ID			40315B	403158	4031	L5B	40315B		
Mercury	(7471)								
<i>l</i> ercury		mg/kg dw	0.00691	0.00891	0.0	21I	0.00761		
Percent Solid	S		54	50	31		52		
Dilution Fact	or		1	1	1		1		
Prep Date			03/15/04	03/15/04	03/3	15/04	03/15/04		
Analysis Date	1		03/15/04	03/15/04	03/	15/04	03/15/04		
Batch ID			40315R	40315R	403	15R	40315R		
pH (9045	5	an a	····	· . ·	t to a se	· · · • ·			• * *
рН		units	9.4	9.5	10.1	2 .	9.2		
Percent Solid	is		54	50	31	-	52		
Dilution Fact	or		1	1	1		1		
Analysis Date	2		03/13/04	03/13/04	- 03/	13/04	- 03/13/04		
Batch ID	. ·		0313A	0313A	031	3A	0313A		
		· ·				b.			
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ab Sample ID Description			Matrix	Date Received	Date Sampled	SDG#
21112-5 Method Blank	·····,···		Solid	03/12/04		
Parameter	Units	Lab Sample IDs 21112-5	•••			·
Volatiles by CC/MS (8260)						
Benzene	ug/kg dw	1.70				
Bromobenzene	ug/kg dw	1.20				
Bromochloromethane	ug/kg dw	1.20				
Bromodichloromethane	ug/kg dw	0.880			•	
Bromoform	ug/kg dw	0.820				
Bromomethane (Methyl bromide)	ug/kg dw	3.60				
n-Butylbenzene	ug/kg dw	2.10				
sec-Butylbenzene	ug/kg dw	2.40	-			
tert-Butylbenzene	ug/kg dw	2.00				
Carbon tetrachloride	ug/kg dw	1.90				
Chlorobenzene	ug/kg dw	1.30				•
Chloroethane	ug/kg dw	2.20				
Chloroform	ug/kg dw	1.70				
Chloromethane	ug/kg dw	1.30				
2-Chlorotoluene	ug/kg dw	1.00				
4Chlorotoluene	ug/kg dw	1.20				
Dibromochloromethane	ug/kg dw	0.84U				
1,2-Dibromo-3-chloropropane	ug/kg dw	0.610				
1,2-Dibromoethane (EDB)	ug/kg dw	0.860				
Dibromomethane	ug/kg dw	0.93U				•
1,2-Dichlorobenzene	ug/kg dw	1.10				
1,3-Dichlorobenzene	ug/kg dw	1.30		en de la service de la composition de l		· · · ·
1,4-Dichlorobenzene	ug/kg dw	1.40				
Dichlorodifluoromethane	ug/kg dw	2.40				
1,1-Dichloroethane	ug/kg dw	1.60				
1,2-Dichloroethane	ug/kg dw	1.20				
1,1-Dichloroethene	ug/kg dw	2.20				
cis-1,2-Dichloroethene	ug/kg dw	1.70				
trans-1,2-Dichloroethene	ug/kg dw	1.90				
1 2-Dichloropropage	ua/ka dw	1 411				

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ab Sample ID Description			Matrix	Date Received	Date Sampled	SDG#
1112-5 Method Blan	<	·····	Solid	03/12/04		
arameter	Units	Lab Sample IDs 21112-5	. 1	na serie de la composición de la compos	·	1. 92 - 19
Volatiles by CC/MS (8	260)					
.,3-Dichloropropane	ug/kg dw	1,60				
2-Dichloropropane	ug/kg dw	2.00				
1,1-Dichloropropylene	ug/kg dw	2.00	4			
is-1,3-Dichloropropene	ug/kg dw	0.990				
trans-1,3-Dichloropropene	ug/kg dw	2.10				
Ethylbenzene	ug/kg dw	2.00				
Hexach lorobutadiene	ug/kg dw	1.40				
Isopropylbenzene	ug/kg dw	3.8U				
p-Cymene	ug/kg dw	1.4U				
Methylene chloride						
(Dichloromethane)	ug/kg dw	1.40				
Naphthalene	ug/kg dw	0.570				
n-Propylbenzene	ug/kg dw	1.70				
Styrene	ug/kg dw	1.8 U				
1,1,1,2-Tetrachloroethane	ug/kg dw	1.30				
1,1,2,2-Tetrachloroethane	ug/kg.dw	1.00				
Tetrachloroethene	ug/kg dw	3.0U				
Toluene	ug/kg dw	1.8U				
1,2,3-Trichlorobenzene	ug/kg dw	0.960				
1,2,4-Trichlorobenzene	ug/kg dw	1.0U				
1,1,1-Trichloroethane	ug/kg dw	2.10				
1,1,2-Trichloroethane	ug/kg dw	0,960	• •	· · · ·	· · · · ·	· • · · ·
Trichloroethene	ug/kg dw	2.10				
Trichlorofluoromethane	ug/kg dw	2.80				
1,2,3-Trichloropropane	ug/kg dw	1.00				
1,2,4-Trimethylbenzene	ug/kg dw	1.00	•			
1,3,5-Trimethylbenzene	ug/kg dw	1.20				•.
Vinyl chloride	ug/kg dw	1.50				
o-Xvlene	ug/kg dw	1.6U				
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		Analytical Data Report	t			
ab Sample ID Description			Matrix	Date Received D	ate Sampled	SDG#
21112-5 Method Blank			Solid	03/12/04		
Parameter	Units	Lab Sample IDs 21112-5		and the second second		
Volatiles by GC/MS (8260)					
Acetone	ug/kg dw	3.60				
2-Butanone (MEK)	ug/kg dw	3.30				
4-Methy1-2-pentanone (MIBK)	ug/kg dw	4.90				
Carbon disulfide	ug/kg dw	2.20			•	
2-Hexanone	ug/kg dw	4.80				
Methyl t-butyl ether (MTBE)	ug/kg dw	1.20				
Surrogate - Toluene-d8 *	%	84 %				
Surrogate -						
4-Bromofluorobenzene *	%	88 %				
Surrogate -						
Dibromofluoromethane *	%	82 %				
Dilution Factor		1				
Analysis Date		03/19/04				
Batch ID		0319E(A)				
Semivolatile Organics (8	270)					
1,3-Dichlorobenzene	ug/kg dw	310				
1,4-Dichlorobenzene	ug/kg dw	270				2
HexachToroethane	ug/kg dw	240				
bis(2-Chloroethyl)ether	ug/kg dw	260				
1,2-Dichlorobenzene	ug/kg dw	24 U * * * * * *	· .	and a second second	a ser a sera	
2,2'-Oxybis(1-chloropropane)	<u>ь</u>					
is(2-Chloroisopropy1)ether]	ug/ka dw	330				
n-Nitrosodi-n-propylamine	ug/kg dw	320				
Nitrobenzene	ug/kg dw	2711				
Hexachlorobutadiene	ua/ka dw	231				
1,2,4-Trichlorobenzene	ua/ka dw	2211				
Isophorone	ua/ka dw	261				
Naphthalene	ua/ka dw	250				
- · ·	-3/3 411.		• • 4 · 7	· · · · · ·		

Page 16 of 43

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	·	Analytical Data Report				
Lab Sample ID Description			Matrix	Date Received	Date Sampled	SDC#
21112-5 Method Blank			Solid	03/12/04		
a to a		Lab Sample IDs		a a second		
Parameter	Units	21112-5				
Semivolatile Organics (8270)			·		
bis(2-Chloroethoxy)methane	ug/kg dw	290				
Hexachlorocyclopentadiene	ug/kg dw	510				
2-Chloronaphthalene	ug/kg dw	240				
Acenaphthylene	ug/kg dw	210			•	
Acenaphthene	ug/kg dw	290	`			
Dimethylphthalate	ug/kg dw	250				
2,6-Dinitrotoluene	ug/kg dw	290				
Fluorene	ug/kg dw	310				
4-Chlorophenylphenyl ether	ug/kg dw	28U				
2,4-Dinitrotoluene	ug/kg dw	400				
Diethylphthalate	ug/kg dw	320				
N-Nitrosodiphenylamine	ug/kg dw	250				
HexachTorobenzene	ug/kg dw	45U				
4-Bromophenylphenyl ether	ug/kg dw	24U				
Phenanthrene	ug/kg dw	170				
Anthracene	ug/kg dw	210			•	
Di-n-butylphthalate	ug/kg dw	280				
Fluoranthene	ug/kg dw	31U				
Pyrene	ug/kg dw	630				
Butylbenzylphthalate	ug/kg dw	420				
bis(2-Ethylhexyl)phthalate	ug/kg dw	450				
Chrysene	ug/kg dw	210		• ••• •••		the term of the training
Benzo(a)anthracene	ug/kg dwi	200				
3,3'-Dichlorobenzidine	ug/kg dw	1500				· ·
Di-n-octy1phthalate	ug/kg dw	. 54U				
Benzo(b)fluoranthene	ug/kg dw	230	•			
Benzo(k)fluoranthene	ug/kg dw	,260				
Benzo(a)pyrene	ug/kg dw	290				
Indeno(1,2,3-cd)pyrene	ug/kg dw	67U				
Dibenzo(a,h)anthracene	ug/kg dw	520	•		· · ·	

Page 17 of 43

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		Analycical Data Report				
Lab Sample ID Description			Matrix	Date Received	Date Sampled SDG	ŧ
21112-5 Method Blank	······		Solid	03/12/04		
Parameter	Units	Lab Sample IDs 21112-5				
Semivolatile Organics (8	270)		·		·	
Benzo(g,h,i)perylene	ug/kg dw	260				
N-Nitrosodimethylamine	ug/kg dw	49U				
2-Chlorophenol	ug/kg dw	320				
2-Nitrophenol	ug/kg dw	190			1	
Phenol	ug/kg dw	420			•	
2,4-Dimethylphenol	ug/kg dw	280				
2,4-Dichlorophenol	ug/kg dw	310				
2,4,6-Trichlorophenol	ug/kg dw	20U				
4-Chloro-3-methylphenol	ug/kg dw	49 U				
2,4-Dinitrophenol	ug/kg dw	1500				
2-Methyl-4,6-dinitrophenol	ug/kg dw	2000				
Pentachlorophenol	ug/kg dw	1800				
4-Nitrophenol	ug/kg dw	1600				
Benzyl alcohol	ug/kg dw	300	•			
2-Methylphenol (o-Cresol) 3-Methylphenol/4-Methylphenol	ug/kg dw I	320				
(m&p-Cresol)	ug/kg dw	420				
Benzoic acid	ug/kg dw	610				
4-Chloroaniline	ug/kg dw	37U				
2-Methylnaphthalene	ug/kg dw	320				
2,4,5-Trichlorophenol	ug/kg dw	290				
2-Nitroaniline	ug/kg dw	420	an the second	•	and the second	·· · · .
3-Nitroaniline	ug/kg dw	320				
Dibenzofuran	ug/kg dw	300				
4-Nitroaniline	ug/kg dw	420				
Surrogate - 2-Fluorophenol *	%	85 %				
Surrogate - Phenol-d5 *	%	94 %				
Surrogate - Nitrobenzene - d	5					
*	% ·	76 %				
Surrogate - 2-Fluorobiphenyl	* %	94 %				



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Analytical Data Report						
Lab Sample ID Description			Matrix	Date Received	Date Sampled	SDG#
21112-5 Method Blank			Solid	03/12/04		
Parameter	Units	Lab Sample IDs 21112-5		<u>.</u>		
Semivolatile Organics (8	270)	- - - 3	<u> </u>	· · · · ·		
-						
2 / E.Tribromonhonol *	•	07.44				
2,4,0-11 Dromopriendi "	76 67	97 %				
Dilution Eactor	76	106 %			•	
Pren Date		1				
Analveis Date		03/17/04				
Batch TD		03/10/04				
		0317H				
Cl-Pesticides (8081)						
Aldrin	ug/kg dw	0.150				
alpha-BHC	ug/kg dw	0.130				
beta-BHC	ug/kg dw	0.620				
gamma-BHC (Lindane)	ug/kg dw	0,570				
delta-BHC	ug/kg dw	0.0830				
Chlordane (technical)	ug/kg dw	3.40				
4,4'-DDD	ug/kg dw	0.350				
4,4'-DDE	ug/kg dw	0.240				
4,4'-DDT	ug/kg dw	0.350				
Dieldrin	ug/kg dw	0.240		,		
Endosulfan I	ug/kg dw	0.140				
Endosulfan II	ug/kg dw	0.430	4.*	·* ·· · ·	All And	
Endosulfan sulfate	ug/kg dw	0.440				
Endrin	ug/kg dw	0.42U				
Endrin aldehyde	ug/kg dw	0.240				
Heptachlor	ug/kg dw	0.200				
Heptachlor epoxide	ug/kg dw	0.120				
Methoxychlor	ug/kg dw	0.510				
Toxaphene	ug/kg dw	330				
Surrogate -						
2,4,5,6-Tetrachloro-m-xyle	ne	n an teanna br>Teanna an teanna an te				
* (XMDT)	%	48 %				

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Analytical Data Report

Ditiz t Mathad Blank			biloz	03/12/04		
21112-5 Method Blank	K	lah Samle TDs	30110	03/12/04		
Parameter	Units	21112-5		· ·		
Cl-Pesticides (8081)						
Surrogate -						
Decachlorobiphenyl (DCB)	* %	57 %				
Dilution Factor		1				
Prep Date		03/15/04			٢	
Analysis Date	٠.	03/16/04				
Batch ID		03151		•		
PCB's (8082)				·		
Aroclor-1016	ug/kg dw	5.70				
Aroclor-1221	ug/kg dw	7.60				
Aroclor-1232	ug/kg dw	3.50				,
Aroclor-1242	ug/kg dw	6.50				
Aroclor-1248	ug/kg dw	5.90				
Aroclor-1254	ug/kg dw	8.20				
Aroclor-1260	ug/kg dw	8.00				
Surrogate - TCX *	%	54 %				
Surrogate - DCB *	%	57 %				
Dilution Factor		1				
Prep Date		03/15/04				
Analysis Date		03/16/04				
Batch ID	ter an earlier an earlie	03151	14 A A		an a	· · · · · · · · · · · · · · · · · · ·
Organophosphorus Pes	sticides (8141)					
Azinphos methyl	ug/kg dw	7.00				
Bolstar (Sulprofos)	ug/kg dw	5.50				
Chlorpyrifos	ug/kg dw	4.3U				
Coumaphos	ug/kg dw	8.50				
Demeton	ug/kg dw	4.8U				
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		Analytical Data Report		· · ·	ta an	
Lab Sample ID Description			Matrix	Date Received	Date Sampled	SDG#
21112-5 Method Blank			Solid	03/12/04		
		Lab Sample IDs				
Parameter	Units	21112-5			<u></u>	
Organophosphorus Pesticid	es (8141)					
Diazinon	ug/kg dw	7.00				
Dichlorvos	ug/kg dw	1.30				
Dimethoate	ug/kg dw	150				
Disulfoton	ug/kg dw	2.60			٩	
EPN	ug/kg dw	11U 、				
Ethoprop	ug/kg dw	9.70				
Fensulfothion	ug/kg dw	6.30				
Fenthion	ug/kg dw	2.40				
Malathion	ug/kg dw	7.60			•	
Merphos	ug/kg dw	100				
Mevinphos	ug/kg dw	3.80				
Mononcrotophos	ug/kg dw	1300				
Naled	ug/kg dw	6.9U				
Ethyl Parathion	ug/kg dw	6.8U				
Methyl parathion	ug/kg dw	4.20	•			
Phorate	ug/kg dw	2.40				
Ronneil	ug/kg dw	4.00				
Sulfotepp (Tetraethy]		и. -				
dithiopyrophosphate)	ug/kg dw	7.70				
Stirophos (Tetrachlorvinphos)) ug/kg dw	5.4U				
Tokuthion (Prothiofos)	ug/kg dw	9.10				
Trichloronate	ug/kg dw	3.6U		· · · ·	···, ·	
Surrogate -						
Triphenylphosphate *	%	86 %				
Dilution Factor		1				
Prep Date		03/16/04	•			
Analysis Date		03/23/04				
Batch ID		0316I				

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Page 21 of 43

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6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

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	· · · · · · · · · · · ·	Analytical Data Report	t '		4 · · · ·	
Lab Sample ID Description	'n		Matrix	Date Received	Date Sampled	SDG#
21112-5 Method Bla	unk		Solid	03/12/04		
Parameter	Units	Lab Sampile IIDs 21112-5				
Chlorinated Herbicic	ies (8151)					
2,4-D	ug/kg dw	1.60				
2,4-DB	ug/kg dw	6.40				
2,4,5-T	ug/kg dw	1.00				
2,4,5-TP Silvex	ug/ka dw	0.900			•	
Dalapon	ug/ka dw	230	•		•	
Dicamba	ug/kg dw	1.20				•
Dichlorprop	ua/ka dw	2.70				
Dinoseb	ua/ka dw	8.30				
(4-Chloro-2-Methylphenox	/)-Ace					
tic Acid	ua/ka dw	7400				
2-(4-Chloro-2-Methylphene	oxv)-P					
ropanoic Acid	ua/ka dw	4001				
Pentachlorophenol	ua/ka dw	0.960				
Picloram	ug/kg dw	1.20				
Surrogate-DCAA *	%	46 %				
Dilution Factor		1				
Prep Date						
Analysis Date		03/23/04				
Batch ID		0322K				
Metals (6010)	. ···					
Arsenic	ma/ka dw	0.1สเ		· ·	1 .	чн ^у .
Barium	mg/kg dw	0.160				
Cadmium	mg/kg dw	0.0870				
Chromium	mg/kg dw	0.170				
Lead	mg/kg dw	0.420				
Selenium	mg/ka dw	0.430				
Silver	mg/ka dw	0.190				
Dilution Factor		1				
Prep Date	· . · · ·	03/15/04		•		· · ,
Analysis Date		03/16/04				
Batch ID		403158				



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Analytical Data Report

Lab Sample III Description	·····			Matrix	Date Received	Date Sampled	SUG#	
21112-5 Method Blank				Solid	03/12/04	* .		
Parameter	Units	Lab 5 21112-5	ample LUS					
Mercury (7471)				<u>.</u>				
Mercury Dilution Factor Prep Date Analysis Date Batch ID	mg/kg dw	0.0028U 1 03/15/04 03/15/04 40315R				•		
pH (9045)								
pH Dilution Factor Analysis Date Batch ID	units	6.2 1 03/13/04 0313A		• •				
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			Analytica	l Data Report			•••	
Lab Sample ID	Description				Matrix	Date Rece	rived Date Sa	npied SDC#
21112-6	Lab Control S	tandard % Reco	very		Solid	03/12/04		<u> </u>
21112-7	Lab Control S	tandard Duplic	ate % Recovery		Solid	03/12/04		
21112-8	Precision (%R	PD) of LCS/LCS	Ð		Solid	03/12/04		
21112-9	LCS Accuracy	Control Limit	(%R)		Solid	03/12/04		
21112-10	LCS Precision	Control Limit	: (Advisory) %RPD		Solid	03/12/04		
			Lab S	ample IDs				
Parameter		Units	21112-6	21112-7	2111	12-8	21112-9	21112-10
Volatiles	s by GC/MS (826	0)						
Benzene		*	86 %	88 %	2.3	%	49-142 %	<42 %
Chlorobenzene		%	92 %	104 %	12 9	6	66-135 %	<34 %
1,1-Dichloroe	thene	%	116 %	114 %	1.7	%	40-164 %	≪46 %
Toluene		%	86 %	82 %	4.8	%	38-158 %	<32 %
Trichloroethe	ne	%	88 %	90 %	2,2	%	51-146 %	<34 %
Surrogate - Te	oluene-d8 *	%	84 %	82 %			66-136 %	
Surrogate -								
4-Bromofluo	robenzene *	%	82 %	88 %	•		63-135 %	
Surrogate -								
Dibromofluo	romethane *	%	86 %	86 %			58-142 %	
Dilution Fact	or		1	1				
Analysis Date	ł		03/19/04	03/19/04				
Batch ID			0319E(A)	0319E(A)	031	9E(A)		
Semivola	atile Organics	(8270)						
1,4-Dichiorot	enzene	%	82 %	76 %	7.4	%	10-105 %	<31 %
n-Nitrosodi-r	n-propylamine	% "	82 %	82 %	0 %	5 -	11-122 %	<37 %
1,2,4-Trichlo	orobenzene	%	94 %	82 %	13	%	10-112 %	<22 %
Acenaphthene		%	88 %	82 %	6.9	%	18-123 %	<49 %
2,4-Dinitroto	oluene	%	76 %	76 %	0 %	د .	11-120 %	<37 %
Pyrene		%	112 %	106 %	5.4	%	10-133 %	<42 %
2-Chlorophene	ſo	%	85 %	79 %	7.4	1 %	15-111 %	<38 %
Pheno 1		%	85 %	73 %	15	%	13-115 %	<39 %
4-Chloro-3-m	ethylphenol	%	100 %	85 %	16	%	24-114 %	<32 %
Pentachlorop	henol	%	85 %	85 %	0 %	6	10-140 %	<55 %



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Dilution Factor

Prep Date Analysis Date

Batch ID

Lab Sample ID	Description				Matrix [ate Received Date Sam	pied SDG
21112-6	Lab Control Sta	ndard % Reco	overy		Solid (3/12/04	·····
21112-7	Lab Control Sta	ndard Dupli	cate % Recovery	•	Solid (3/12/04	
21112-8	Precision (%RPD)) of LCS/LC	SD		Solid (3/12/04	
21112-9	LCS Accuracy Co	ontrol Limit	(CR)		Solid (3/12/04	
21112-10	LCS Precision (Control Limit	t (Advisory) %RPD	· .	Solid (3/12/04	
			Lab	Sample 110s			
Parameter		Units	21112-6	21112-7	21112-4	8 21112-9	21112-10
Semivola	tile Organics (8	270)	1				
4-Nitrophenol		%	85 %	` 85 %	0 %	15-118 %	< 57 %
Surrogate - 2	-Fluorophenol *	%	88 %	79 %		16-113 %	
Surrogate - P	heno]-d5 *	%	97 %	88 %		19-114 %	
Surrogate - N	litrobenzene - d5						
*		%	88 %	76 %		20-120 %	
Surrogate - 2	2-Fluorobiphenyl	* %	94 %	82 %		30-120 %	
Surrogate -							·
2,4,6-Trib	romophenol *	%	103 %	97 %		23-129 %	
Surrogate - 3	Terpheny1-d14 *	%	112 %	100 %		30-131 %	
Dilution Fact	tor		1	1			
Prep Date			03/17/04	03/17/04			
Analysis Date	e		03/18/04	03/18/04			
Batch ID			0317H	0317H	0317H		
Cl-Pest	i cides (8 081)			•			
Aldrin		%	70 %	65 %	8.7 %	10-144 %	<38 %
gamma-BHC (L	indane)	*	70 %	65 %	8.7 %	12-138 %	<37 %
4,4'-DDT		%	70 %	65 %	8.7 %	29-134 %	<26 %
Dieldrin		%	76 %	70 %	8.0 %	28-137 %	<30 %
Endrin		%	70 %	65 %	8.7 %	33-149 %	<32 %
Heptachlor		%	65 %	59 %	· 9.5 %	17-138 %	<38 %
Surrogate -						•	
2,4,5,6-Te	etrachloro-m-xyle	ne					
(TOMX) *		%	70 %	63 %		30-150 %	
Surrogate -	· .		. .			a di kara da ka	
Decachloro	obiphenv1 (DCB) *	* %	84 %	75 %		30-150 %	

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Analytical Data Report

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03/15/04

03/16/04 0315I

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03/15/04

03/16/04

0315I



Analysis Date

Batch ID

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Analytical Data Report Lab Sample ID Description Matrix Date Received Date Sampled SDG# 21112-6 Lab Control Standard % Recovery Solid 03/12/04 Lab Control Standard Duplicate % Recovery 21112-7 Solid 03/12/04 21112-8 Precision (%RPD) of LCS/LCSD Solid 03/12/04 21112-9 LCS Accuracy Control Limit (%R) Solid 03/12/04 LCS Precision Control Limit (Advisory) %RPD 21112-10 Solid 03/12/04 Lab Sample IDs Parameter Units 21112-6 21112-7 21112-8 21112-9 21112-10 PCB's (8082) Aroclor-1016 % 59 % 59 % 0 % 34-138 % <44 % Aroclor-1260 % 65 % 70 % 8.7 % 39-138 % <30 % Surrogate - TCX * % 57 % 54 % 30-150 % Surrogate - DCB * % 60 % 61 % 30-150 % Dilution Factor 1 1 Prep Date 03/15/04 03/15/04 Analysis Date 03/16/04 03/16/04 Batch ID 0315I 0315I 0315I Organophosphorus Pesticides (8141) Diazinon % 76 % 118 % 43 %* 41-128 % <30 % Ethyl Parathion % 92 % 111 % 19 % 24-151 % <79 % Methyl parathion % 80 % 100 % 22 % 36-149 % <40 % Ronnel % 66 % 80 % 20 % 26-130 % <35 % Surrogate -Triphenylphosphate * % 74 % 91 % 30-137 % Dilution Factor 1 1 Prep Date 03/16/04

03/16/04

03/23/04

0316I

0316I

03/23/04

0316I



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Lab Sample ID	Description			Matrix	Date F	leceived Date Sa	npledi SDG#
21112-6	Lab Control Standard % F	Recovery	-	Solid	03/12/	′04	
21112-7	Lab Control Standard Du	olicate % Recovery		Solid	03/12/	/04	
21112-8	Precision (%RPD) of LCS	/LCSD		Solid	03/12/	/04	
21112-9	LCS Accuracy Control Lin	nit (%R)		Solid	03/12/	/04	
21112-10	LCS Precision Control L	imit (Advisory) %RPD		Solid	03/12/	/04	
		Lab S	amole IDs				
Parameter	Units	21112-6	21112-7	211	12-8	21112-9	21112-10
Chlorinat	ted Herbicides (8151)						
2,4-D	%	35 %	38 %	9.7	%	، 19–153 %	<47 % `
2,4,5-T	%	17 %	19 %	9,8	%	14-143 %	<59 %
2,4,5-TP Silv	ex %	32 %	35 %	10 :	%	27-120 %	<51 %
Surrogate-DCA	A* %	100 %	110 %			30-189 %	
Dilution Fact	or	· 1	1				
Prep Date		03/22/04	03/22/04				
Analysis Date	:	03/23/04	03/23/04				
Batch ID		0322K	0322K	032	2K		
Metals ((6010)						
Arsenic	%	101 %	101 %	0.2	1%	75-125 %	<20 %
Barium	*	95 %	96 %	0.3	1%	75-125 %	⊲20 %
Cadmium	%	107 %	107 %	0.3	8 %	75-125 %	<20 %
Chromium	%	104 %	104 %	0.2	4 %	75-125 %	<20 %
Lead	%	105 %	105 %	0.0	4 %	75-125 %	<20 %
Selenium	%	100 %	100 %	0.2	21 %	75-125 %	<20 %
Silver	%	93 %	93 %	0.1	7 %	75-125 %	<20 %
Dilution Fact	tor	1	1		•		
Prep Date		03/15/04	03/15/04				
Analysis Date	2 .	03/16/04	03/16/04				
Batch ID		40315B	40315B	· 403	315B		

Analytical Data Report

Page 27 of 43



•		•	Analytical	Data Report				•	
Lab Sample ID	Description				Matrix	Date Rece	ived [late Samp	led SDG#
21112-6	Lab Control Standa	ard % Recove	ry		Solid	03/12/04			
21112-7	Lab Control Standa	ard Duplicate	e % Recovery		Solid	03/12/04			
21112-8	Precision (%RPD) o	of LCS/LCSD			Solid	03/12/04			
21112-9	LCS Accuracy Conti	rol Limit (%	R)		Solid	03/12/04			
21112-10	LCS Precision Cont	trol Limit (Advisory) %RPD	•	Solid	03/12/04			
			Lab Sa	mple IDs					
Parameter	U	nits	21112-6	21112-7	211	12-8	21112	-9	21112-10
Mercury	(7471)							4	
Mercury	`%		101 %	99 %	1.9	%	80-12	0 %	<20 %
Dilution Fact	or		1	1					
Prep Date			03/15/04	03/15/04					
Analysis Date	1		03/15/04	03/15/04					
Batch ID			40315R	40315R	403	15R			
pH (9045	5)								
pН	9	6	98 %	98 %	0 %	5	63-15	8 %	<40 %
Dilution Fact	tor		1	1					
Analysis Date	e .		03/13/04	03/13/04					
			03134	02120	021	RA .			



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Analytical Data Report

Lab Sample ID	Description				Matrix	Date R	eceived Date (Sampled SDG#
21112-11	Matrix Spike	% Recovery			Solid	03/12/0	04	
21112-12	Matrix Spike	Duplicate % Re	ecovery		Solid	03/12/	04	
21112-13	Precision (%R	PD) MS/MSD	-		Solid	03/12/0		
21112-14	MS Accuracy A	dvisory Limit	(%R)		Solid	03/12/		
21112-15	MS Precision	Advisory Limit	t (%RPD)		Solid	03/12/	04 04	
		-	Lab S	ample TDs		•0,		
Parameter		Units	21112-11	21112-12	2111	2-13	21112-14	21112-15
Volatiles	s by CC/MS (826	;0)						·
Benzene		%	67 % `	72 %	19 9	6	49-142 %	` ح42 %
Chlorobenzene		%	61* %]3	60* %]3	9.2	%	66-135 %	<74 %
1,1-Dichloroet	thene	%	100 %	112 %	23 9	6	40-164 %	<46 %
Toluene		%	55 %	54 %	10 9	K	38-158 %	<32 %
Trichloroether	ne	%	69 %	74 %	18 9	6	51-146 %	~34 %
Surrogate - To	oluene-d8 *	%	80 %	86 %		•	66-136 %	~ J+ 70
Surrogate -							00 200 %	
4-Bromofiluo	robenzene *	%	74 %	74 %		•	63-135 %	
Surrogate -								
Dibromofluo	romethane *	%	82 %	89 %			58-142 %	
Dilution Facto	or		1	1				
Analysis Date	·		03/19/04	03/19/04				
Batch ID			0319E(A)	0319E(A)	031	DE(A)		
Semivola	tile Organics ((8270)						
1,4-Dichlorob	enzene	%	81. %	84 %	3.9	%	10-105 %	<31 %
n-Nitrosodi-n	-propylamine	%	77 %	77 %	0 %		11-122 %	<37 %
1,2,4-Trichlo	robenzene	%	84 %	87 %	3.8	%	10-112 %	<22 %
Acenaphthene		%	84 %	87 %	3.8	%	18-123 %	<49 %
2,4-Dinitroto	luene	%	68 %	77 %	13 9	*	11-120 %	<37 %
Pyrene		%	97 %	103 %	6.4	%	10-133 %	<42 %
2-Chloropheno	ה	%	79 %	81 %	2.0	%	15-111 %	<38 %
Phenol		%	74 %	77 %	4.2	%	13-115 %	<39 %
4-Chloro-3-me	thylphenol	%	82 %	92 %	11 9	6	24-114 %	<32 %
Pentachloroph	enol	%	27 %	35 %	26 9	%	10-140 %	~55 %



		Analytical	Data Report				
ab Sample ID Descrip	otion			Matrix	Date Rece	rived Date San	pled SDG#
	Spike % Recovery		<u></u>	Solid	03/12/04		
1112-12 Matrix	Spike Duplicate % R	lecovery		Solid	03/12/04		
1112-13 Precis	ion (%RPD) MS/MSD	-		Solid	03/12/04		
21112-14 MS Acc	uracy Advisory Limit	: (%R)		Solid	03/12/04		•
1112-15 MS Pre	cision Advisory Limi	t (%RPD)		Solid	03/12/04		
	-	Lab Sa	mple IDs				
Parameter	Units	21112-11	21112-12	2111	2-13	21112-14	21112-15
Semivolatile Org	anics (8270)						
4-Nitropheno]	%	53 %	58 %	8.7	%	15-118 %	<57 %
Surrogate - 2-Fluorog	bheno] * %	81 %	84 %			16-113 %	
Surrogate - Phenol-ds	5* %	87 %	90 %			19-114 %	
Surrogate - Nitrobenz	zene – d5						
*	%	84 %	87 %			20-120 %	
Surrogate - 2-Fluorol	biphenyl *%	87 %	87 %			30-120 %	
Surrogate -							
2,4,6-Tribromophen	ol* %/	89 %	95 %			23-129 %	
Surrogate - Terpheny	1-d14 * %	97 %	110 %			30-131 %	
Dilution Factor		1	1				
Prep Date		03/17/04	03/17/04				
Analysis Date		03/18/04	03/18/04				
Batch ID		0317H	0317H	031	.7H		•
CI-Pesticides (8081)						
Aldrin	% .	52 %	52 %	0 %	\$	10-144 %	<38 %
gamma-BHC (Lindane)	х на си ж а и и	48 %	52 %	6.4	%-	12-138 %	<37 %
4,4'-DDT	%	52 %	52 %	0 9	6	2 9-134 %	<26 %
Dieldrin	%	52 %	55 %	6.1	%	28-137 %	<30 %
Endrin	%	52 %	55 %	6.1	L %	33-149 %	<32 %
Heptachlor	%	48 %	48 %	. 09	6	17-138 %	<38 %
Surrogate -							
2,4,5,6-Tetrachlo	ro-m-xylene						
(TCMO) *	%	52 %	54 %			30 -150 %	
Surrogate -							
Decachlorobipheny	1 (DCB) * %	64 %	68 %			30-150 %	
Dilution Factor		1	1				
Prep Date		03/15/04	03/15/04				
Analysis Date		03/16/04	03/16/04				
Ratch TD		0315T	0315T	03	15I		



			Analytica	i Data Report				
Lab Sample ID	Description				Matrix	Date R	eceived Date Sa	npled SDG#
21112-11	Matrix Spike	% Recovery			Solid	03/12/	04	
21112-12	Matrix Spike	Duplicate % Re	covery		Solid	03/12/	04	
21112-13	Precision (%	RPD) MS/MSD			Solid	03/12/	04	
21112-14	MS Accuracy	Advisory Limit	(%R)		Solid	03/12/	04	
21112-15	MS Precision	Advisory Limit	: (%RPD)		Solid	03/12/	04	
			Lab S	ample IDs				
Parameter		Units	21112-11	21112-12	2111	2-13	21112-14	21112-15
PCB's (80	082)						·······	
Aroclor-1016	·	%	42 %	54 %	25 9	6	, 34-138 %	<44 %
Aroclor-1260		%	52 %	76 %	38 9	633	39-138 %	<30 %
Surrogate - T	CX *	%	42 %	50 %			30-150 %	
Surrogate - D	CB *	%	46 %	56 %			30-150 %	
Dilution Fact	or		1	1				
Prep Date			03/15/04	03/15/04				
Analysis Date	2		03/16/04	03/16/04				
Batch ID			03151	03151	031	51		
Organoph	osphorus Pest	icides (8141)						
Diazinon		%	120 %	119 %	0.2	8 %	41-128 %	<30 %
Ethyl Parathi	ion	%	115 %	111 %	3.6	%	24-151 %	<79 %
Methyl parath	nion	%	105 %	102 %	3.1	%	36-149 %	<40 %
Ronnell		*	81 %	78 %	3.7	%	26-130 %	<35 %
Surrogate -								
Triphenylph	nosphate *	%	90 %	84 %			30-137 %	
Dilution Fact	tor		1	1	t se tra a	· · ·	e de la composición d	sa Maga ana a
Prep Date			03/16/04	03/16/04				
Analysis Date	e		03/23/04	03/23/04				
Batch ID			0316I	0316I	031	.6I		



		Analytical	Data Report			· .	
ab Sample 1D	Description			Matrix	Date R	eceived Date Sa	npled SDG#
21112-11	Matrix Spike % Recovery			Solid	03/12/0)4	
21112-12	Matrix Spike Duplicate	% Recovery		Solid	03/12/0)4	
<u>21112-13</u>	Precision (%RPD) MS/MSD			Solid	03/12/0	04	
21112-14	MS Accuracy Advisory Li	mit (%R)		Solid	03/12/	04	
21112-15	MS Precision Advisory L	imit (%RPD)		Solid	03/12/	04	
		Lab S	ample IDs				
Parameter	Units	21112-11	21112-12	211	2-13	21112-14	21112-15
Chlorinat	ted Herbicides (8151)						
2,4-D	%	10 %]3	8.8 %]3	13 5	6	19-153 %	<47 %
2,4,5-T	%	97 %	88 %	10 :	6	14-143 %	< 59 %
2,4,5-TP Silv	ex %	69 %	62 %	9.5	%	27-120 %	<51 %
Surrogate-DCA	A* %	73 %	70 %			·30–189 %	
Dilution Facto	or	1	1				
Prep Date		03/22/04	03/22/04				
Analysis Date	2	03/23/04	03/23/04			•	
Batch ID		0322K	0322K	032	2K		
Metals ((6010)						
Arsenic	%	110 %	111 %	0.4	2 %	75-125 %	<20 %
Barium	%	93 %	95 %	2.7	: %	75-125 %	<20 %
Cadmium	%	96 %	96 %	0.0	55 %	75-125 %	<20 %
Chromium	%	94 %	94 %	0.6	51 %	75-125 %	<20 %
Lead	%	98 %	99.%	0.0	56 %	75-125 %	<20 %
Selenium	%	109 %	110 %	0.3	70 %	75-125 %	<20 %
Silver	%	107 %	108 %	0.3	36 %	75-125 %	<20 %
Dilution Fac	tor	1	1				
Prep Date		03/15/04	03/15/04				
Analysis Dat	e	03/16/04	03/16/04				
Batch ID		40315B	40315B	40	3158		· ·



Lab Sample ID Description Matrix Date Sample ID Solid 03/12/04 21112-11 Matrix Spike X Recovery Solid 03/12/04 Solid 03/12/04 21112-12 Matrix Spike X Recovery Solid 03/12/04 Solid 03/12/04 21112-13 Precision (XRRD) MS/MSD Solid 03/12/04 Solid 03/12/04 21112-14 KS Accuracy Advisory Limit (XRD) Solid 03/12/04 Solid 03/12/04 21112-15 MS Precision Advisory Limit (XRD) Solid 03/12/04 Solid 03/12/04 21112-15 Ms Accuracy Advisory Limit (XRD) Lab Sample IDS 21112-13 21112-14 21112-15 Mercury (7471) X 77 %*F73 85 X 8.7 X 80-120 X <20 X Prep Date 03/15/04 03/15/04 03/15/04 03/15/04 03/15/04 Analysis Date 03/15/04 03/15/04 03/15/04 03/15/04 03/15/04 pH units -				Analytical I)ata Report				
2112-11 Matrix Spike % Recovery Solid 03/12/04 2112-12 Matrix Spike Buplicate % Recovery Solid 03/12/04 2112-12 Matrix Spike Buplicate % Recovery Solid 03/12/04 2112-13 Precision (RAD) MS/MS Solid 03/12/04 21112-14 MS Accuracy Advisory Limit (ORD) Solid 03/12/04 21112-15 MS Precision Advisory Limit (ORD) Solid 03/12/04 21112-16 Matrix Spike % Recovery Solid 03/12/04 21112-17 Matrix Spike % Recovery Solid 03/12/04 21112-18 MS Accuracy Advisory Limit (ORD) Solid 03/12/04 21112-11 21112-12 21112-13 21112-14 21112-15 Mercury (7471) % 77 %*F73 85 % 8.7 % 80-120 % -20 % Pillution Factor 1 1 Prep Date 03/15/04 03/15/04 Analysis Date 03/15/04 03/15/04 03/15/04 0315R pH units	Lab Sample ID	Description				Matrix	Date R	eceived Date Sa	mpled SDG#
21112-12 Natrix Spike Duplicate % Recovery Solid 03/12/04 21112-13 Precision (QRD) MS/MSD Solid 03/12/04 21112-14 M Accuracy (Marisory Limit (QR) Solid 03/12/04 21112-15 MS Precision (Advisory Limit (QR) Solid 03/12/04 21112-15 MS Precision Advisory Limit (QR) Solid 03/12/04 Parameter Units 21112-12 21112-13 21112-14 21112-15 Mercury (7471) X 77 %*F73 85 % 8.7 % 80-120 % -20 % Pillotion Factor 1 1 Prep Date 03/15/04 03/15/04 Prop Date 03/15/04 03/15/04 03/15/04 Batch 1D 40315R 40315R 40315R pH units	21112-11	Matrix Spike	% Recovery			Solid	03/12/	04	
21112-13 Precision (XRRD) KS/NSD Solid 03/12/04 21112-14 NS Accuracy Advisory Limit (XRD) Solid 03/12/04 21112-15 NS Precision Advisory Limit (XRD) Solid 03/12/04 21112-15 NS Precision Advisory Limit (XRD) Solid 03/12/04 21112-15 NS Precision Advisory Limit (XRD) Solid 03/12/04 21112-17 Lab Sample IDs Image: Comparison of the text of text	21112-12	Matrix Spike	Duplicate % Reco	very		Solid	03/12/	04	
21112-14 MS Accuracy Advisory Limit (%RD) Solid 03/12/04 21112-15 MS Precision Advisory Limit (%RD) Solid 03/12/04 Parameter Units 21112-11 21112-12 21112-13 21112-14 21112-15 Mercury (7471) Mercury (7471) Mercury (7471) N 1 1 1 20 % -20 % -20 % Pilution Factor 1 1 1 1 1 20 % -21 % -20 %<	21112-13	Precision (%R	PD) MS/MSD			Solid	03/12/	04	
21112-15 MS Precision Advisory Limit (%RPD) Solid 03/12/04 Lab Sample IDs 21112-13 21112-14 21112-15 Mercury (7471)	21112-14	MS Accuracy A	dvisory Limit (%	R		Solid	03/12/	04	
Lab Semple IDS 21112-13 21112-14 21112-15 Mercury (7471) Mercury (7471) S5 X 8.7 % 80-120 % -20 % Mercury (7471) Mercury (7471) Mercury (7471) S5 X 8.7 % 80-120 % -20 % Mercury (7471) Mercury (7471) Mercury (7471) S5 X 8.7 % 80-120 % -20 % Mercury (7471) Mercury (7471) Mercury (7471) Mercury (7471) S5 X 8.7 % 80-120 % -20 % Mercury (7471) Me	21112-15	MS Precision	Advisory Limit ((%RPD)		Solid	03/12/	04	
Parameter Units 2112-11 2112-12 2112-13 2112-14 2112-15 Mercury (7471) Mercury (7471) X 77 %*F73 85 % 8.7 % 80-120 % <20 %	. .			Lab Sam	ple IDs				
Mercury (7471) % 77 %*F73 85 % 8.7 % 80-120 % -20 % D'Ilution Factor 1	Parameter		Units	21112-11	21112-12	2111	2-13	21112-14	21112-15
Mercury % 77 %*F73 85 % 8.7 % 80-120 % -20 % Dilution Factor 1 1 Prep Date 03/15/04 03/15/04 Analysis Date 03/15/04 03/15/04 Batch ID 40315R 40315R pH (3045)	Mercury (7471)							
Dilution Factor 1 1 1 Prep Date 03/15/04 03/15/04 Analysis Date 03/15/04 03/15/04 Batch ID 40315R 40315R 40315R pH (9045) pH units	Mercury		% 、	77 %*F73	85 %	8.7	%	80-120 %	<20 %
Prep Date 03/15/04 03/15/04 Analysis Date 03/15/04 03/15/04 Batch ID 40315R 40315R 40315R pH units	Dilution Facto	or		1	1 ·	•			
Analysis bate 03/15/04 03/15/04 Batch ID 40315R 40315R 40315R pH (9045) pH units	Prep Date			03/15/04	03/15/04				
Bătăr ID 40315K 40315R 40315 pH (9045) pH units	Analysis Date			03/15/04	03/15/04				
pH (9045) pH units	Batch ID			40315R	40315R	4031	lsr		
pH units	pH (9045))							
	рH		units						
					•				
	n an na an	et en	· ·	• · · · · · · · · · · · · · · · · · · ·	. • •	·. ··		et al contra	e a ser e c
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			Analytica	1 Data Report				
Lab Sample ID	Description	·			Matrix	Date Received	Date Sampled	SDG#
21112-16	Method Number				Solid	03/12/04		
2 <u>1112-1</u> 7	Practical Quanti	itation Limit (P	2L)		Solid	03/12/04		
21112-18	Method Detection	n Limit (MDL)			Solid	03/12/04		
			Lab S	ample IDs				
Parameter		Units	21112-16	21112-17	2111	2-18		
Volatile	s by GC/MS (8260)							
Benzene		ug/1	8260B	5.0	1.7			
Bromobenzene		mg/l	8260B	5.0	1.2		,	
Bromochlorome	thane	ug/l	8260B	5.0	· 1.2			
Bromodichloro	methane	ug/l	8260B	5.0	0.88	3		
Bromoform		ug/1	8260B	5.0	0,82	2		
Bromomethane	(Methyl bromide)	ug/l	8260B	10	3.6			
n-Butvlbenzen	ie	ug/l	8260B	5.0	2.1			
sec-Butylbenz	tene	ug/l	82608	5.0	2.4			
tert-Butylber	nzene	ug/1	82608	5.0	2.0			
Carbon tetrad	chloride	ug/l	8260B	5.0	1.9			
Chlorobenzen	2	ug/1	8260B	5.0	1.3			
Chloroethane		ug/l	8260B	10	2.2			
Chloroform		ug/l	8260B	5.0	1.7			
Chloromethan	e	ug/l	8260B	10	1.3			
2-Chlorotolu	ene	ug/l	8260B	5.0	1.0			
4-Chlorotolu	ene	ug/l	8260B	5.0	1.2			
Dibromochlor	omethane		8260B	5.0	0.8	4		
1,2-Dibromo-	3-chloropropane	mg/1	8260B	10	0.6	51		
1,2-Dibromoe	thane (EDB)	mg/1	8260B	5.0	0.8	36		
Dibromometha	ne	1 mg/1 · · · · · · · ·	8260B	5.0	- 0.9	13	• • • •	•
1,2-Dichlord	benzene	ug/1	8260B	5.0	1.1	L		
1,3-Dichloro	benzene	ug/l	8260B	5.0	1.3	3		
1,4-Dichloro	obenzene	ug/1	8260B	5.0	1.4	\$		
1,1-Dichloro	pethane	ug/l	8260B	5.0	· 1.0	5		
1,2-Dichloro	bethane	ug/l	8260B	5.0	1.3	2		
1,1-Dichlor	oethene	ug/l	8260B	5.0	2.3	2		
cis-1.2-Did	hloroethene	ug/l	8260B	5.0	1.	7		
trans-1.2-D	ichloroethene	ug/l	8260B	5.0	1.	9		



			Analytica	l Data Report		· .		
Lab Sample ID De	scription				Matrix	Date Received	Date Sampled	SDG#
21112-16 Me	thod Number				Solid	03/12/04		
21112-17 Pr	actical Quant	itation Limit	(PQL)		Solid	03/12/04		
21112-18 Me	thod Detectio	n Limit (MDL)			Solid	03/12/04		
•			Lab S	ample IDs		,,		
Parameter		Units	21112-16	21112-17	21112	2-18		
Volatiles by	/ CC/MS (8260)							
1,2-Dichloropropa	ane	ug/]	8260B	5.0	1.4			
1,3-Dichloropropa	ane	mg/1	8260B	5.0	1.6			
2,2-Dichloropropa	ane	ug/1	8260B	5.0	2.0			
1,1-Dichloropropy	ylene	ug/l	8260B	5.0	2.0		•	
cis-1,3-Dichlorop	propene	mg/kg dw	8260B	5.0	0.99			
trans-1,3-Dichlo	ropropene	mg/kg dw	8260B	5.0	2.1			
Ethylbenzene		ug/1	8260B	5.0	2.0			
Hexachlorobutadi	ene	ug/l	8260B	5.0	1,4			
Isopropylbenzene		ug/l	8260B	5.0	3.8	•		
p-Cymene		ug/1	8260B	5.0	1.4			
Methylene chlori	de							
(Dichlorometha	ne)	ug/l	8260B	5.0	1.4			
Naphthalene		ug/1	8260B	5.0	0.57			
n-Propylbenzene		mg/1	8260B	5.0	1.7			
Styrene		ug/l	8260B	5.0	1.8			
1,1,1,2-Tetrach]	oroethane	mg/1	82608	5.0	1.3			
1,1,2,2-Tetrach1	oroethane	ug/1	8260B	5.0	1.0			
Tetrachloroethen	e	ug/l	8260B	5.0	3.0			
Toluene		ug/1	8260B	5.0	1.8			
1,2,3-Trichlorob	enzene	ug/1	8260B	5.0	0.96	· . ·	the state of the	
1,2,4-Trichlorob	enzene	ug/1	8260B	5.0	1.0			
1,1,1-Trichloroe	thane	ug/1	8260B	5.0	2.1			
1,1,2-Trichlorce	thane	ug/1	8260B	5.0	0.96			
Trichloroethene		ug/1	8260B	5.0	2.1			
Trichlorofluoran	ethane	ug/1	8260B	5,0	2.8			
1,2,3-Trichlorop	propane	mg/l	8260B	5.0	1.0			
1,2,4-Trimethylb	enzene	ug/1	8260B	5.0	1.0			
1.3.5-Trimethylb	enzene	ua/l	8260B	5.0	1 2			



			Analytica	i Data Report				
Lab Sample 110 [description	÷			Matrix	Date Received	Date Sampled	SDG#
21112-16	lethod Number				Solid	03/12/04		
21112-17	Practical Quant	itation Limit	t (PQL)		Solid	03/12/04		
21112-18	Method Detection	on Limit (MDL))		Solid	03/12/04		
			Lab S	ample IDs				
Parameter		Units	21112-16	21112-17	2111	2-18		· · ·
Volatiles	by CC/MS (8260))	÷.					
Vinvl chloride		ua/l	8260B	10	1.5			
o-Xvlene		ma/l	8260B	5.0	1.6		•	
m&n-Xvlene		ma/1	8260B	5.0	3.0			
Acetone		ua/1	8260B	50	3.6			
2-Butanone (ME)	0	ma/1	8260B	25	3.3			
4-Methyl-2-pent	tanone (MIBK)	ua/]	8260B	25	4.9			
Carbon disulfi	de	ua/1	8260B	5.0	2.2			
2-Hexanone		ua/l	82608	25	4.8			-
Methyl t-butyl	ether (MTBE)	uq/1	8260B	50	1.2			
Dichlorodifluo	romethane	ug/kg dw		5.0	2.4			
Semivolat	ile Organics (8270)				·		
1.3-Dichlorobe	nzene	uq/l	8270C	330	31			
1.4-Dichlorobe	nzene	uq/l	8270C	330	27			
Hexachloroetha	ne	ua/l	8270C	330	24			
bis(2-Chloroet	hvl)ether	uq/l	8270C	330	26			
1.2-Dichlorobe	enzene	uq/l	8270C	330	24			
2.2'-0xvbis(1-	-chloropropane)	Гь						
is(2-Chloro	sopropyl)ether	'] ug/1 🜼	8270C	330	33	and the second	e a la composición de	
n-Nitrosodi-n-	-propylamine	ug/l	8270C	330	32			
Nitrobenzene		ug/l	8270C	330	27			
Hexachlorobut	adiene	ug/1	8270C	330	23	· .		
1,2,4-Trichlo	robenzene	ug/I	8270C	330	22			
Isophorone		ug/l	8270C	330	26			
Naphthalene		ug/1	8270C	330	25			
bis(2-Chloroe	thoxy)methane	ug/1	8270C	330	29			
Hexachlorocyc	lopentadiene		8270C	330	51			,



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-			Analytica	l Data Report		-			
Lab Sample ID [Description				Matrix	Date Received	Date Sampled	SDG#	
21112-16 N	Method Number				Solid	03/12/04		<u> </u>	
21112-17	Practical Quar	titation Limi	t (PQL)		Solid	03/12/04			
21112-18	Method Detecti	on Limit (MDL)		Solid	03/12/04			
			Lab S	ample IDs		• •			
Parameter	·	Units	21112-16	21112-17	2111	12-18	. · · ·		
Semivolati	le Organics (3270)							
2-Chloronaphtha	lene	ug/l	8270C	330	24				
Acenaphthylene		ug/l	8270C	330	21				
Acenaphthene		ug/l v	8270C	330	29				
Dimethylphthala	te	ug/1	8270C	330	25				
2,6-Dinitrotolu	lene	ug/1	8270C	330	29				
Fluorene		ug/1	8270C	330	31				
4-Chlorophenylp	henyl ether	ug/1	8270C	330	28				
2,4-Dinitrotolu	iene .	ug/l	8270C	330	40				
Diethylphthalat	e	ug/l	8270C	330	32				
N-Nitrosodipher	nylamine		8270C	330	25				
Hexach lorobenze	ene	ug/l	8270C	330	45				
4-Bromophenylph	enyl ether	ug/l	8270C	330	24				
Phenanthrene		ug/1	8270C	330	17				
Anthracene		ug/l	8270C	330	21				
Di-n-butylphtha	alate	ug/l	8270C	330	28				
Fluoranthene		ug/l	8270C	330	31				
Pyrene		ug/l	8270C	330	63				
Butylbenzylpht	halate	ug/1	8270C	330	42				
bis(2-Ethylhexy	yl)phthalate	ug/l	8270C	330	45				
Chrysene	· · · ·	`ug/1	8270C	330	21				
Benzo(a)anthra	cene	ug/1	8270C	330	20				-
3,3'-Dichlorob	enzidine	ug/l	8270C	660	150)			
Di-n-octylphth	alate	ug/i	8270C	330	54				
Benzo(b)fluora	nthene	ug/T	8270C	330	· 23				_
Benzo(k)fluora	nthene	ug/1	8270C	330	26				
Benzo(a)pyrene		ug/l	8270C	330	29				
Indeno(1,2,3-c	d)pyrene	ug/l	8270C	330	67				
Dibenzo(a,h)an	thracene	ug/l	8270C	330	52				



		Analytica	i Data Report					
ab Sample ID Descript	ion			Matrix	Date Received	Date Sampled	SDG#	
21112-16 Method N	umber			Solid	03/12/04			•
21112-17 Practica	l Quantitation Limi	t (PQL)		Solid	03/12/04			
21112-18 Method D	etection Limit (MDL)	×	Solid	03/12/04			
		Lab S	ample IDs					
Parameter	Units	21112-16	21112-17	2111	2-18			
Semivolatile Ordar	nics (8270)				······			-
Benning and a gen	· · · · · · ·							
Benzo(g,h,i)perylene	ug/l	8270C	330	26				
N-Nitrosodimethylamine		8270C	330	49		۲		
2-Chlorophenol	ug/l	8270C	330	32				
2-Nitrophenol	ug/l	8270C	330	19				
Phenol	ug/1	8270C	330	42				
2,4-Dimethylphenol	ug/1	8270C	330	28				
2,4-Dichlorophenol	ug/1	8270C	330	31				
2,4,6-Trichlorophenol	ug/l	8270C	330	20				
4-Chloro-3-methylpheno	l ug/l	8270C	330	49				
2,4-Dinitrophenol	ug/T	8270C	1700	150				
2-Methy1-4,6-dinitroph	enol ug/l	8270C	1700	200	}			
Pentach lorophenol	ug/1	8270C	1700	180) * * *			
4-Nitrophenol	ug/l	8270C	1700	160)			
Benzyl alcohol	mg/1	8270C	330	. 30				
2-Methylphenol (o-Cres	so]) ug/l	8270C	330	32				
3-Methylphenol/4-Methy	/lphenol							
(m&p-Cresol)	ug/1	8270C	330	42				
Benzoic acid	mg/1	8270C	1700	61				
4-Chloroaniline	ug/1	8270C	660	37				
2-Methylnaphthalene	ug/1	8270C	330 -	- 32	· · · · ·	and a second second	· * •	1.14
2,4,5-Trichlorophenol	ug/1	8270C	330	29				
2-Nitroaniline	mg/1	8270C	1700	42	-			
3-Nitroaniline	mg/l	8270C	1700	32				
Dibenzofuran	mg/1	8270C	330	· 30	1		,	
4-Nitroaniline	ug/1	8270C	1700	42				
Batch TD		0317H				,		

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			Analytica	l Data Report				
ab Sample ID	Description				Matrix	Date Received	Date Sampled	SDG#
1112-16	Method Number	···			Solid	03/12/04		
1112-17	Practical Quar	ititation Limi	t (PQL)		Solid	03/12/04		
1112-18	Method Detecti	ion Limit (MDL)	~	Solid	03/12/04		
			Lab S	ample IDs				
Parameter		Units	21112-16	21112-17	2111	2-18		
Cl-Pestic	cides (8081)			<u> </u>			<u> </u>	
Aldrin		ug/1	8081A	1.7	0.15	•		
gamma-BHC (Lii	ndane)	ug/1	8081A	1.7	0.57	,		
4,4'-DDT		ug/l	8081A	3.3	0.35	;		
Dieldrin		ug/l	8081A	3.3	0.24	ļ		
Endrin	-	ug/1	8081A	3.3	0.42	2		
Heptach lor		ug/l	8081A	1.7	0.20) .		
a1pha-BHC		ug/kg		1.7	0.13	3		
beta-BHC		ug/kg		1.7	0.62	2		
delta-BHC		ug/kg		1.7	0.08	33		
Chlordane (te	chnical)	ug/kg		17	3.4			
4,4'-DDD		ug/kg		3.3	0.3	5		
4,4'-DDE		ug/kg		3.3	0.24	4 .		
Endosulfan I		ug/kg		1.7	0.14	4		
Endosulfan II	•	ug/kg		3.3	0.43	3		
Endosulfan su	lfate	ug/kg		3.3	0.4	4		
Endrin aldehy	/de	ug/kg		3.3	0.24	4		
Heptachlor ep	oxide	ug/kg		1.7	0.1	2		
Methoxychior		ug/kg		17	0.5	1		
Toxaphene		ug/kg		170	33			
Batch ID	· · · · · · · · ·	· ·	0315I	ant and a	· ·			
PCB's (8	3082)							
Aroclor-1016	•	ug/1	8082	33	5.7			
Aroclor-1260		ug/1	8082	33	8.0	•		
Aroclor-1221		ug/1		67	7.6			
Aroclor-1232		ug/]		33	3.5			
Aroclor-1242		ug/1		33	6.5			

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		Analytica	l Data Report					
ab Sample ID Description	Ì			Matrix	Date Received	Date Sampled	SDC#	
21112-16 Method Numb	er			Solid	03/12/04			-
21112-17 Practical C	uantitation Limit	: (PQL)		Solid	03/12/04			
21112-18 Method Dete	ection Limit (MDL))		Solid	03/12/04			
		Lab S	ample IDs					
Parameter	Units	21112-16	21112-17	2111	2-18			_
		b.						-
PCB's (8082)								
Aroclor-1248	ug/I	1 B.	33	5.9				
Aroclor-1254	ug/l		33	8.2		•		
Batch ID		0315I	•				•	•
Organophosphorus Pes	ticides (8141)							
Diazinon	maЛ	8141A	33	7.0				
Ethyl Parathion	ug/l	8141A	33	6.8	*			
Methyl narathion	ma/1	8141A	17	4.2		·		
Ronnel	mg/l	8141A	33	4.0				
Azinphos methyl	ug/kg		66	7.0				
Bolstar (Sulprofos)	ug/kg	•	33	5.5				
Chlorpyrifos	ug/kg		33	4.3			•	
Coumaphos	ug/kg		330	8.5				
Demeton	ug/kg		83	4.8				
Dichlorvos	ug/kg		66	1.3				
Dimethoate	ug/kg		66	15				
Disulfoton	ug/kg	•	66	2.6				
EPN	ug/kg		33	11	_			
Ethoprop	ug/kg	• • •	17	9.7		· · ·	· . · ·	
Fensulfothion	ug/kg		330	6.3	3			
Fenthion	ug/kg		33	2.4	1			
Malathion	ug/kg		33	7.0	b			
Merphos	ug/kg		33	· 10				
Mevinphos	ug/kg		66	3.	8			
Mononcrotophos	ug/kg		330	13	0			
Naled	ug/kg		330	6.	9			
Phorate	ug/kg		. 33	2.	4			
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· .			Analytica	1 Data Report				
Lab Sample ID Desc	cription				Matrix	Date Received	Date Sampled	SDG#
21112-16 Meth	nod Number				Solid	03/12/04		and the second
21112-17 Prac	ctical Quant	itation Limi	it (PQL)		Solid	03/12/04		
21112-18 Meth	nod Detectio	n Limit (MDL	_)		Solid	03/12/04		
		-	iab S	ample TDs	oonu			
Parameter		Units	21112-16	21112-17	2111	2-18		· · ·
Organophospho	rus Pesticio	les (8141)						
Sulfotepp (Tetraet	hyl	,						
dithiopyrophosph	ate)	uq/kq		17	77			
Stirophos (Tetrach	lorvinphos)	ug/kg		33	5.4		•	
Tokuthion (Prothio	fos)	ug/kg		33	9.1			
Trichloronate		ug/kg		330	3.6			
Batch ID			0316I		210			
Chlorinated H	erbicides (8151)						
2,4-D			8151A	8.3	1.6			
2,4-DB		mg/1	8151A	8.3	6.4			
2,4,5-T		mg/1	8151A	8.3	1.0			
2,4,5-TP Silvex			8151A	8.3	0.9	0		
Dalapon		mg/l	8151A	2000	23			
Dicamba.		mg/1	8151A	20	1.2			
Dichlorprop		mg/1	8151A	100	2.7			
Dinoseb		mg/1	8151A	100	8.3			
(4-Chloro-2-Methyl	phenoxy)-Ac	e						
tic Acid		mg/1	8151A	2000	740			
2-(4-Chloro-2-Meth	ylphenoxy)-	р., .,	• ·			and the second		· · · · · · · · · · · · · · · · · · ·
ropanoic Acid		mg/1	8151A	2000	400		·	
Pentach lorophenol		ug/l	8151A	17	0.9	6		
Picloram		ug/1	8151A	3.3	1.2			
Batch ID			032 2K					

Page 41 of 43



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		Analytic	cal Data Report					
ab Sample ID	Description			Matrix	Date Received	Date Sampled	SDC#	
1112-16	Method Number		·····	Solid	03/12/04			-
1112-17	Practical Quantitation	Limit (PQL)		Solid	03/12/04			
1112-18	Method Detection Limit	(MDL)		Solid	03/12/04			
		Lab	Sample IDs					
Parameter	Units	21112-16	21112-17	2111	2-18			
Metals (6	010)							
Arsenic	mg/l	6010B	0.50	0.16				
Barium	mg/l	6010B	1.0	0.16		•		
Cadmium	mg/1	6010B ·	0.50	0.08	7			
Chromium	mg/l	6010B	1.0	0.17				
Lead	mg/1	6010B	0.50	0.42				
Selenium	mg/1	6010B	1.0	0.43	1			
Silver	mg/1	6010B	1.0	0.19				
Batch ID		40315B						
Mercury	(7471)							
Mercury Batch ID		7471 40315R	0.020	0.00	028			
pH (9045)		·					
nH		F150.1	•					
Batch ID		0313A		•				
· · · · · · · · · · · · · · · · · · ·	n na na si	· · · · · · ·	· · · · · ·	. *	· · , • ;	ан са с		
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Page 42 of 43

STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Method: EPA SW-846 DOH Certification #: E84282

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

I = The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

U = Indicates that the compound was analyzed for but not detected.

J3 - The reported value failed to meet the established quality control criteria for either precision or accuracy.

*F73 = Matrix spike recoveries were outside advisory limits due to matrix interference present in the sample.

* = RPD was outside laboratory established limits.

P = Identification of target analytes using CC methodology is based onretention time. Although two dissimilar CC columns confirmed thepresence of the target analyte in the sample, relative percentdifference is >40 %. Thus, viewer discretion should be employed duringdata review and interpretation of results for this target compound.

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5 r	<u>www.stl-inc.com</u> Phone: (813) 885 7427 Fax: (813) 885 7049	: Phone:	Fax: PAGE 1 of 1	STANDARD REPORT	DELIVERY	EXPEDITED REPORT DELIVERY	(surcharge)	NUMBER OF COOLERS	SUBMIT TEO PER SHIPMENT:	REMARKS										E) DATE TIME			
·	iin Rd, Suite 100 3634	ooratory Name/Location.	0100000	ED ANALYSES		zlst9r	tars A n 8 AA: I	4d = 4		NTAINERS SUBMITTED	1 1 1	1 1 1	1 1 1	- - -						RECEIVED BY: (SIGNATURI		ORY REWARKS	
	STL Tampa 6712 Benjarr Tamna El 3	Alternate Lat)	REQUIR	1	1808	A 8260	808 Eb		NUMBER OF COL	4 1	4 1	4 1	4 1 1					312.04 0918	BATE ' TIME 3-12-04 0918		П. LOG NO. LABORAT VOI > 11 / 2	/ / /// / / / / / / / / / / / / / / /
· ·	TODY RECORD	1112		TYPE	(*** <u>)</u>	NDICATE	ס (סור, 5C)) OR C	UEOUS			×	× 2	×					ED BY: (SIGNATURE)	Y: GOUNTURE	LABORATORY USE	TACT CUSTODY S	Datum to I ahorator
,	ND CHAIN OF CUS	¢,		DAG Venice, FL	CONTRACT NO. N/A	CLIENT FAX 813.249.0301	<u>psiusa.com</u>	33634	RE	NTIFICATION					· · · ·	· · · ·		.	E RELINQUISH	E RECEIVER B			- Irninin()
	YSIS REQUEST AI			552-4GC	P.O. NUMBER N/A	CLIENT PHONE 813,886.1075	ICLIENT EMAIL michael.bair@	Suite 112, Tampa :	SAMPLER'S SIGNATU	SAMPLE IDE	1 B-2A	No 2, 2	210 B-6	MB R-8					DATE	DATE TIM 3/10/04 08		DATE TIM	
	ANAL	STL		PROJECT REFERENCE City of Venice	STL (LAB) PROJECT MANAGER Michael Valder	CLIENT (SITE) PM Mike Bair	CLIENT NAME	CLIENT ADDRESS 5801 Benjamin Center Drive.	COMPANY CONTRACTING THIS WORK	(if applicable) SAMPLE	3/11/01/ 11:30 am-199-1		2 00 mare 1 2:57	3:10 PM 58-4	-				RELINQUISHED BY: (SIGNATURE)	RECEIVED BY: (signature)		RECEIVED FOR LABORATORY BY	WELLOW CHARTER



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Analytical Report

For: Mr. Michael Bair Professional Service Industries, Inc. 5801 Benjamin Center Drive Suite 112 Tampa, FL 33634 CC:

> Order Number: B421112A SDG Number: Client Project ID: 552-4G029 Project: City of Venice Report Date: 03/26/2004 Sampled By: Client Sample Received Date: 03/26/2004 Requisition Number: Purchase Order:

Aus

Michael F. Valder, Project Manager mvalder@stl-inc.com

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.



STL Tampa	6712 Benjamin Road	, Suite 100 - Ta	mpa FL 33634	Telephone:(813)	885-7427 Fax:(813)	885-7049

Sample Summary

Order: B421112A Date Received: 03/26/2004 Client: Professional Service Industries,Inc. Project: City of Venice

Client Sample ID	Lab Sample ID	Matrix	Date Sampled
B-2A	B421112A*1	Solid	03/11/2004 11:30
B-3	B421112A*2	Solid	03/11/2004 12:20
B-6	B421112A*3	Solid	03/11/2004 14:50
B-8	B421112A*4	Solid	03/11/2004 15:10

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STL Tampa	6712 Benjamin Road,	Suite 100 -	Tampa FL	33634 Т	[e]ephone:(813)	885-7427	Fax: (813)	885-7049
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• -	·.		Analytica	1 Data Report					
.ab Sample ID	Description				Matrix	Date Rece	ived	Date Sampled	SDG#
21112A-1	B-2A		·······		Solid	03/26/04		03/11/04 11:30	
<u>21112</u> A-2	B-3				Solid	03/26/04		03/11/04 12:20	
21112A-3	B-6				Solid	03/26/04		03/11/04 14:50	
21112A-4	B-8				Solid	03/26/04		03/11/04 15:10	
			Lab S	ample IDs		,,			
Parameter		Units	21112A-1	21112A-2	211	2 A- 3	2111	24-4	
Aluminum	(6010)							-	
Aluminum		mg/kg dw	2600	7400	2300)	3500)	
Dilution Fact	or		1	1	, 1		1	·	
Prep Date			03/15/04	03/15/04	03/:	15/04	03/1	.5/04	
Analysis Date	}		03/16/04	03/16/04	03/:	L6/04	03/1	.6/04	
Patch TD			403154	403154	403	154	4021	54	



•••		Analytical Data Report				
Lab Sample ID Description			Matrix	Date Received	Date Sampled	SDG#
21112A-5 Method Blank			Solid	03/26/04		
Parameter	Units	Lab Sample 10s 21112A-5				
Aluminum (6010)				· · · · ·		
Aluminum Dilution Factor Prep Date Analysis Date Batch ID	mg/kg dw	5.8U 1 03/15/04 03/16/04 40315A		·	, , ,	
• •	•					
			×			
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Page 4 of 8



STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

•••			Analytical	Data Report				•.
Lab Sample ID	Description			•	Matrix	Date Rece	rived Date Sa	mpiled SDG#
21112A-6	Lab Control	Standard % R	ecovery		Solid	03/26/04	·	
21112A-7	Lab Control	Standard Dup	licate % Recovery		Solid	03/26/04		
21112A-8	Precision (%	RPD) of LCS/	LCSD		Solid	03/26/04		
21112A-9	LCS Accuracy	/ Control Lim	it (%R)		Solid	03/26/04		
21112A-10	LCS Precisio	on Control Li	mit (Advisory) %RPD		Solid	03/26/04		
			Lab Sa	nple IDs				
Parameter	······································	Units	21112A-6	21112A-7	211	12A-8	21112A-9	21112A-10
Aluminum	(6010)							
Aluminum 🔍	•	× × ×	91 %	91 %	0.7	6 %	, 75-125 %	<20 %
Dilution Fact	or		1	1				
Prep Date			03/15/04	03/15/04				
Analysis Date	2		03/16/04	03/16/04				

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STL Tampa 6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone: (813) 885-7427 Fax: (813) 885-7049

• •. :				Analytical	Analytical Data Report				
.ab Sample ID	Descriptio	n				Matrix	Date Rece	rived Date Sa	npiled SDG
21112A-11	Matrix Spi	ke % Recove	ry		· · · · · · · · · · · · · · · · · · ·	Solid	03/26/04		····
21112A-12	Matrix Spi	ke Duplicat	e % Reco	overy		Solid	03/26/04		
21112A-13	Precision	(%RPD) MS/M	SD			Solid	03/26/04		
21112A-14	MS Accurac	y Advisory	Limit (KR)		Solid	03/26/04		•
21112A-15	MS Precisi	on Advisory	Limit	(%RPD)		Solid	03/26/04		
				Lab S	amole IDs		• .*		
Parameter		Units	6	21112A-11	21112A-12	211	12A-13	21112A-14	21112A-15
Aluminum	(6010)			:					
Aluminum		* %		0 %*F61	0 %*F61	14 :	%	80–120 %	< 20 %
Dilution Fact	or		•	1	1				
Prep Date				03/15/04	03/15/04				
Analysis Date	}			03/16/04	03/16/04				
Ratch TD				40315A	40315A	403	154		

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Lab Sampile ID	Description				Matrix	Date Received	Date Sampled	SDG#
21112A-16 21112A-17 21112A-18	Method Number Practical Quan Method Detect	ntitation Lim	it (PQL)		Solid Solid Solid	03/26/04 · 03/26/04 03/26/04		-
Parameter		Units	Lab : 21112A-16	Sample IDs 21112A-17	21112	2 A-18		
Aluminum	(6010)							
Aluminum Batch ID			6010B 40315K	20	5.8			
				,				
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STL Tampa

6712 Benjamin Road, Suite 100 - Tampa FL 33634 Telephone:(813) 885-7427 Fax:(813) 885-7049

Method: EPA SW-846 DOH Certification #: E84282

These test results meet all the requirements of NELAC. All questions regarding this test report should be directed to the STL Project Manager who signed this test report.

The estimated uncertainty associated with these reported results is available upon request.

U = Indicates that the compound was analyzed for but not detected.

*F61 = The recoveries of the matrix spikes are outside advisory limits due to the abundance of the target analyte in the sample.

Pelz, Susan

Page 1 of 2

Sandischa Central

From: Pelz, Susan

- **Sent:** Tuesday, July 26, 2005 4:40 PM
- To: 'Scott Gresham'
- Cc: JHowley@co.hernando.fl.us; Brian Usher; Lois Rose; Tedder, Richard; Morgan, Steve; Martin, Lee; 'pegg@co.hernando.fl.us'
- Subject: RE: latex paint as daily cover

 Tracking:
 Recipient
 Read

 'Scott Gresham'
 'Scott Gresham'

 JHowley@co.hernando.fl.us
 JHowley@co.hernando.fl.us

 Brian Usher
 Lois Rose

 Lois Rose
 Tedder, Richard

 Morgan, Steve
 Read: 7/26/2005 5:32 PM

 Martin, Lee
 Read: 7/26/2005 4:51 PM

 'pegg@co.hernando.fl.us'
 '

Scott,

As we discussed on the phone, Hernando County's request to use latex paint as initial cover at their landfill was presented to the Department as including only paint generated by Hernando County households. Hernando County did not propose, and the Department's approval did not include, the solicitation of latex paint from other counties or non-household generators. The Department's approval for Hernando County was based on the specific information they provided, which included that the paint was generated by Hernando County residents and that the quantity was minimal.

If other Counties want to reuse latex paint as initial cover, they should contact Richard Tedder in Tallahassee, have the proposal evaluated on a statewide basis and get a statewide letter of no objection for the proposal. If Hernando County is not complying with the approved activity (by using paint generated from sources other than Hernando County residents), we probably need to revisit this issue with them.

Susan J. Pelz, P.E. Solid Waste Program Manager Southwest District 813-744-6100 x 386 susan.pelz@dep.state.fl.us

> -----Original Message----- **From:** Scott Gresham [mailto:SGresham@scgov.net] **Sent:** Wednesday, July 20, 2005 9:25 AM **To:** Pelz, Susan **Cc:** JHowley@co.hernando.fl.us; Brian Usher; Lois Rose **Subject:** latex paint as daily cover

Hi Susan,

Attached, please find the letter I mailed last month pertaining to Hernando County possibly using our latex paint as alternative daily cover on their Class I landfill. When time permits, will you please provide an update, in writing, on the status of our request as stated in the letter. Thank you for your time and it was a pleasure meeting you.

Best Regards,





Scott T. Gresham Environmental Specialist III Sarasota County Hazardous Waste Mgt 8750 Bee Ridge Rd Sarasota, FL 34241 (941) 861-1536 sgresham@scgov.net



SARASOTA COUNTY "Dedicated to Quality Service"

JUL 0 1 2005 By

June 29, 2005

Florida Dept of Environmental Protection Attn: Susan Pelz 3804 Coconut Palm Drive Tampa, FL 33619-8318

Subject: Latex paint used as alternative daily cover.

Dear Ms. Pelz:

It is my understanding that FDEP has granted Hernando County Solid Waste permission to apply latex paint as alternative daily cover to their Class I landfill. Due to their limited supply of latex paint, Hernando County is seeking outside sources to provide them the paint. As a result, they have advertised free pick-up and transportation of latex paint generated by county household hazardous waste programs.

It is our intention to allow Hernando County to pick-up latex paint from the Sarasota County Chemical Collection Center, located at 8750 Bee Ridge Road in Sarasota, FL, and transport it to the Hernando County Landfill, located at 14450 Landfill Road in Brooksville, FL for their future use as an alternative daily cover. We estimate Hernando County will pick up approximately twenty to thirty 55-gallon drums of latex paint each month.

If there are no regulatory concerns or questions from your department, then please provide written approval that will indicate it is acceptable to proceed. Thank you and I look forward to your response.

Sincerely,

Scott T. Gresham Environmental Specialist III Hazardous Waste Management

cc: Jim Dregne, FDEP Raoul Clarke, FDEP Irene Gleason, FDEP Jeff Howley, Hernando County Solid Waste


TRANSMITTAL

Strasita Central Op fermit:

То:	SUSAN PELZ - FDEP	Date:	JULY 22, 2005
From:	BRYAN ZOLLER	Job No:	120544.03 JUL 2 5 2005
Project:	CENTRAL COUNTY LAN	DFILL – CI	TIZEN'S CONVENIENCE CENTER

We are sending you:

Copies	Date	No.	Description
1			SIGNED AND SEALED PROPOSED CONSTRUCTION PLANS 24" X 36"

These are transmitted as checked below:

 For approval For your use X As requested For review and comment 	Reviewed as submitted Reviewed as noted Returned for corrections	
Signed BRYAN ZOLLER	2C	

Distribution:

Memorandum

.

Florida Department of Environmental Protection

PERMIT COVER MEMO			
TO: x DEBORAH A. GETZOFF, Director of District Management			
FROM/THROUGH: William Kutash Susan Pelz, P.E. DATE: July 18 2005 ENVIRONMENTAL ADMINISTRATOR SOLID WASTE MANAGER			
FILE NAME:Sarasota Central County LFPERMIT #:130542-002-SO/01PROGRAM :Solid WasteCOUNTY : Sarasota			
TYPE OF PERMIT ACTION: ISSUE			
PUBLIC NOTICE PERIOD CLOSED?PETPERMIT SUMMARY: This is a permit for corelated facilities.	ITION FILED? ntinued operation of	f a Class I landfill and	
PROFESSIONAL RECOMMENDATION: <u>X</u> APPR	OVE DENY		
EVALUATION SUMMARY: The applicant has provided the required documentation and financial assurance. Total processing time (TIH) = 1235 days (to 07/18/05) Department processing time (TTP) = 206 days (to 07/18/05)			
		ΤΨΨ	
Application received	02/01/02 (KPE)		
RAT #1 cent	03/01/02 (KBF)	29	
Response to RAT #1 rec'd	05/29/02 (KBF)		
RAT #2 sent	07/24/02 (KBF)	27	
Additional info rec'd	07/25/02 07/29/02		
	(KBF)		
Response to RAI #2 rec'd	09/20/02 (KBF)		
RAI #3 sent	10/16/02 (KBF)	27	
Response to RAI #3 rec'd	05/02/03 (KBF)		
Additional info rec'd	05/28/03, 06/05/03,		
	06/12/03, 08/28/03,		
	10/07/03, 12/18/03		
	(KBF)		
Partial response to RAI #3 rec'd	04/01/04 (KBF)		
Additional into rec'd	(S.TP)		
Draft to County for comment	01/31/05 (STP)	75	
Additional info (full sized drawings	02/10/05, 02/17/05		
citizen drop off) rec'd	04/21/05, 06/01/05		
	(SJP)		
Application complete	06/01/05 (SJP)		
Final permit for routing	07/18/05 (SJP)	48	

DAY 90/30 FOR THIS ACTION IS: ASAP - day 90-8/30/05





Jeb Bush Governor Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619

Colleen M. Castille Secretary

CERTIFIED MAIL 7002 3150 0003 8464 0207 RETURN RECEIPT REQUESTED

July 20, 2005

NOTICE OF PERMIT

Sarasota County Solid Waste Operations Mr. Gary Bennett, General Manager 4000 Knights Trail Road Nokomis, Fl. 34275

RE: Sarasota Central County Solid Waste Disposal Complex (SCCSWDC) Class I Landfill Permit Number 130542-002-SO/01, Sarasota County

Dear Mr. Bennett:

Enclosed is operation permit number **130542-002-SO/01**, issued pursuant to Section(s) 403.087(1), Florida Statutes.

A person whose substantial interests are affected by this transfer of permits may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, 3900 Commonwealth Blvd., MS#35, Tallahassee, 32399-3000, within fourteen (14) days of receipt of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within fourteen (14) days shall constitute a waiver of any right such person has to an administrative determination (hearing) pursuant to Section 120.57, Florida Statutes.

The petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of Department's action, or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrants reversal or modification of the Department's action or proposed action;

- (f) A statement of which rules or statutes petitioner contends warrant reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

This permit is final and effective on the date filed with the Clerk of the Department unless a petition is filed in accordance with the above paragraphs or unless a request for extension of time in which to file a petition is filed within the time specified for filing a petition and conforms to Rules 62-110 and 28-106, F.A.C. Upon timely filing of a petition or a request for an extension of time this permit will not be effective until further Order of the Department.

When the Order is final, any party to the Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 3900 Commonwealth Blvd., MS#35, Tallahassee, 32399-3000; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date the Final Order is filed with the Clerk of the Department. Executed in Tampa, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Getzoff Del District Director thwest District Sou

DAG/sjp

Enclosures

cc: Sarasota County Officials/Notification List Frank Coggins, Landfill Manager, Sarasota County, 4000 Knights Trail Road, Nokomis, Fl. 34275

John A. Banks, P.E., SCS Engineers, 3012 US Highway 301 North, Ste. 700, Tampa, Fl. 33619

Richard Tedder, P.E., FDEP Tallahassee Doug Beason, OGC Tallahassee Fred Wick, P.E., FDEP Tallahassee (Permit Notebook) FDEP Tampa

CERTIFICATE OF SERVICE

This undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on <u>July 20, 2005</u> to the listed persons.

(date stamp)

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(10), Florida Statutes, with the designated Department, Clerk, receipt of which is hereby acknowledged.

MAR Black

7120/05

Clerk



Jeb Bush Governor

SWIAL PROTECTIV

PERMITTEE

Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619

Colleen M. Castille Secretary

Sarasota County Solid Waste Operations Mr. Gary Bennett, General Mgr 4000 Knights Trail Road Nokomis, Florida 34275

PERMIT/CERTIFICATION

WACS ID No: SWD/58/51614 Permit No: 130542-002-SC/01 Date of Issue: 07/20/2005 Expiration Date: 07/20/2010 County: Sarasota Lat/Long: 27°12'11"N 82°23'16"W Sec/Town/Rge:1-4, 9-16/38S/19E Project: Central County Solid Waste Disposal Complex (CCSWDC), Class I Landfill

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-330, 62-520, 62-522, 62-550, and 62-701. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

To operate, monitor and maintain a Class I landfill - Phase 1 (approximately 55 acres), and related facilities, referred to as the Central County Solid Waste Disposal Complex, subject to the specific and general conditions attached, for the management and disposal of solid waste, located at the north end of Knights Trail Road, 2 miles east of I-75, northeast of Venice, Sarasota County, Florida. The specific conditions attached are for the operation of a:

- 1. Class I Landfill
- 2. Leachate Storage Tank, and special waste management

General Information:	
Disposal acres	55 acres (5 disposal units - "Cells")
Lowest elevation	+24 feet NGVD (Cell 5 sump)
Bottom liner design	Composite, 60 mil HDPE on one foot of clay
LCS design (sideslope risers)	Geonet/geotextile, rock/8-inch HDPE LCS piping, 24" sand
LDS design	none
Leachate storage tank	Single concrete tank, 1.8 MG, concrete secondary
	containment [ref. Operation Plan, §L.2.h.2., Attachment L-7]
Final elevation (including	+121 feet NGVD [ref. SC#A.2.b, Sheet 2]
cover)	
Slopes	3H:1V sideslopes,
	4% top slope [ref. SC#A.2.b., Sheet 3]

This permit contains compliance items summarized in **Attachment 1** that shall be complied with and submitted to the Department by the dates noted. If the compliance dates are not met and submittals are not received by the Department on the dates noted, enforcement action may be initiated to assure compliance with the conditions of this permit.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.161, 403.727, or 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of rights, nor any infringement of federal, State, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, are required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

(a) Have access to and copy any records that must be kept under conditions of the permit;

(b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

(c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

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

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

(a) A description of and cause of noncompliance; and

(b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statues after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

GENERAL CONDITIONS:

11. This permit is transferable only upon Department approval in accordance with Rule 62-4.120 and 62-730.300, Florida Administrative Code, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

- 13. This permit also constitutes:
 - (a) Determination of Best Available Control Technology (BACT)
 - (b) Determination of Prevention of Significant Deterioration (PSD)

(c) Certification of compliance with State Water Quality Standards (Section 401, PL 92-500)

(d) Compliance with New Source Performance Standards

14. The permittee shall comply with the following:

(a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

(b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

 the date, exact place, and time of sampling or measurements;
 the person responsible for performing the sampling or measurements;
 the dates analyses were performed;
 the person responsible for performing the analyses;
 the analytical techniques or methods used;
 the results of such analyses.

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GENERAL CONDITIONS:

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS: PART A, Solid Waste Facility General Requirements

1. Landfill Designation. This site shall be classified as a Class I Landfill, and shall be operated in accordance with all applicable requirements of Chapters 62-4, 62-302, 62-330, 62-520, 62-522 and 62-701, Florida Administrative Code.

2. Permit Application Documentation. This permit is valid for operation of the Class I landfill and related appurtenances in accordance with in accordance with all applicable requirements of Department rules and the reports, plans and information submitted by SCS Engineers, Inc. [SCS] (unless otherwise noted), as follows:

a. Document entitled <u>Operation Permit Renewal Application –</u> <u>Central County Solid Waste Disposal Complex</u>, (3-ring bound document) dated February 28, 2002 (received March 1, 2002) as revised, replaced or amended (information inserted into original) June 28, 2002, July 26, 2002 (received July 29, 2002), September 20, 2002, May 2, 2003, May 28, 2003, April 1, 2004, June 4, 2004 (received June 7, 2004), and November 18, 2004, including, but not limited to:

- 1) Operations Plan (Section L);
- 2) Groundwater Monitoring Plan Addendum (Section M);
- 3) Stormwater berm sideslope stability information (Section J).

b. Plan Sheets titled, <u>Sarasota County Central County Solid Waste</u> <u>Disposal Complex Operations Drawings,...</u> (11" x 17" Sheets 1 through 17, including 13A, B, C and D) dated March 2004 (received April 1, 2004) including revised sheets inserted into original received June 7, 2004 and full-size set received February 10, 2005;

c. <u>Geotechnical Evaluation, Hydrogeological Survey and</u> <u>Groundwater Monitoring Plan, Sarasota Central Landfill Complex,</u> <u>Sarasota County, Florida,</u> (spiral bound document) dated March 10, 1992 (received June 28, 2002) prepared by Ardaman & Associates, Inc.

d. Appendix A, <u>Groundwater Monitoring Plan Evaluation, Central</u> <u>County Solid Waste Disposal Complex,...</u> (3-ring bound document), dated June 28, 2002, including information (inserted into original) received July 29, 2002.

e. Information concerning Citizen Convenience Center dated May 27, 2005 (received June 1, 2005) (inserted into *Operations Plan* [ref. SC#A.2.a(1)]), prepared by PBSJ, including plan sheets titled, <u>Central</u> <u>County Landfill Citizen's Convenience Center,... Mar. 2005</u> (7 sheets) (received April 21, 2005) and Sheet 4 received June 1, 2005 (inserted into set).

SPECIFIC CONDITIONS: PART A, Solid Waste Facility General Requirements

3. **Permit Modifications.**

a. Any construction or operation not previously approved as part of this permit shall require a separate Department permit unless the Department determines a permit modification to be more appropriate. Any significant changes to the operations at the facility shall require a permit modification. Permits shall be modified in accordance with the requirements of Rule 62-4.080, F.A.C. A modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review by the Department is considered a substantial modification.

b. This permit authorizes the **operation** of the Phase I, Class I disposal facility, the leachate storage tank system and related appurtenances.

4. **Permit Renewal. No later than January 15, 2010,** the permittee shall apply for a renewal of a permit on forms and in a manner prescribed by the Department, in order to assure conformance with all applicable Department rules. Permits shall be renewed at least every five years as required by Rule 62-701.320(10), F.A.C. Operation permit renewal shall include, but not be limited to, an updated Operations Plan and Site Plans for sequence of filling with crosssections of lifts.

5. **Professional Certification.** Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.), Florida Statutes, applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

6. **General Conditions.** The permittee shall be aware of and operate under the "General Conditions". General Conditions are binding upon the permittee and enforceable pursuant to Chapter 403, Florida Statutes.

7. **Permit Acceptance.** By acceptance of this Permit, the Permittee certifies that he/she has read and understands the obligations imposed by the Specific and General Conditions contained herein and also including date of permit expiration and renewal deadlines. It is a violation of this permit for failure to comply with all conditions and deadlines.

8. **Regulations.** Chapter 62-701, F.A.C., effective May 27, 2001, is incorporated into this permit by reference. In the event that the regulations governing this permitted operation are revised, the Department shall notify the permittee, and the permittee shall request modification of those specific conditions which are affected by the revision of regulations to incorporate those revisions.

SPECIFIC CONDITIONS: PART A, Solid Waste Facility General Requirements

9. **Prohibitions.**

a. The prohibitions of Rule 62-701.300, F.A.C., shall not be violated by the activities at this facility.

b. In the event that surface depressions which may be indicative of sinkhole activity, or subsurface instability, are discovered onsite, or within 500 feet of the site, the Department shall be notified in accordance with Specific Condition #C.6.b, below. Written notification shall be submitted within 7 days of discovery. The written notification shall include a description of the depression, the location and size of the depression shown on an appropriate plan sheet, and a corrective action plan which describes the actions necessary to prevent the unimpeded discharge of waste or leachate into ground or surface water.

c. <u>Waste Burning</u>. Open burning of solid waste is prohibited except in accordance with Rule 62-701.300(3) and Chapter 62-256, F.A.C. All fires which require longer than one (1) hour to extinguish must be promptly reported to the Department in accordance with Specific Condition #C.6.b., below.

SPECIFIC CONDITIONS: PART B - Construction Requirements

1. Construction.

a. All significant construction activities shall be approved by the Department prior to initiating work, unless specifically authorized otherwise.

b. This permit authorizes the construction of the Citizen Convenience Center [ref. SC#A.2.e].

2. Certification of Construction Completion. All information required by this Specific Condition shall be signed and sealed by a registered professional engineer or land surveyor as appropriate. At the completion of construction, information listed below shall be provided to the Department as part of the Certification of Construction Completion.

a. Within sixty (60) days after any specified construction has been completed or as otherwise specified in this permit, the following activities shall be completed:

1) The owner or operator shall submit a Certification of Construction Completion, Form 62-701.900(2), signed and sealed by the professional engineer responsible for the construction to the Department for approval, and shall arrange for Department representatives to inspect the construction in the company of the permittee, the engineer, and the facility operator.

2) The owner or operator shall submit Record Drawings/Documents showing all changes (i.e. all additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Documents shall include as-built plans details and elevations (survey) as appropriate.

3) The owner or operator shall submit a narrative indicating all changes in plans and the cause of the deviations, and certification by the design engineer to the Department.

4) The engineer of record shall provide a report to verify conformance with the project specifications. The report including all related testing results shall be submitted to the Department along with the completion of construction documents.

1. Facility Operation Requirements.

a. The permittee shall operate this facility in accordance with Rule 62-701.500, F.A.C.; the information listed in Specific Condition #A.2., above; and any other applicable requirements.

b. Waste shall not be disposed (unloaded, spread, or compacted) during non-daylight hours, unless sufficient lighting is provided to adequately assess the materials and remove unacceptable wastes.

c. Leachate shall not be deposited, injected, dumped, spilled, leaked, or discharged in any manner to soils, surface water or groundwater outside the liner and leachate management systems at any time during the construction or operation of this facility.

d. The permittee shall clearly stake/mark the location of the edge of the liner and maintain the locations as the landfill increases in elevation to prevent waste disposal and leachate runoff outside the geomembrane liner. The markers shall be of a sufficient size or design that effectively prevents waste disposal in unauthorized areas. The staking/markers shall be maintained at all times throughout the operation of the facility. Waste shall not be disposed within ten feet of the edge of the liner.

e. Top gradients of intermediate cover shall be designed to prevent ponding or low spots and minimize erosion. **Daily**, the owner or operator shall operate the facility, maintain grades, or utilize berms and swales, to prevent ponded water within the disposal areas. Ruts from traffic and heavy equipment that may cause ponding shall be regraded at the end of each working day.

f. The Class I disposal area shall be operated to limit the leachate head to one foot above the liner.

g. <u>Unauthorized Wastes</u>. A sufficient number of spotters shall be utilized at the facility for removing unacceptable wastes. At a minimum, spotting shall occur at the working face from the ground (i.e. while off of the equipment) while waste is being disposed. Unauthorized wastes shall be removed from the site for proper disposal in accordance with the *Operations Plan* [ref. SC#A.2.a(1)].

h. Site Inspections.

1) The owner or operator shall inspect the site for erosion and settlement (low spots and improperly graded areas) daily on operating days. Erosion and settlement shall be repaired in accordance with Specific Condition #C.6.

(Specific Condition #C.1.h., cont'd)

2) The owner or operator shall inspect the landfill facility for the presence of objectionable odors at the property boundary **daily on operating days**. In the event that objectionable odors are detected at the property boundary, the owner or operator shall abate the odors in accordance with Specific Condition #C.5.

3) The owner or operator shall inspect the normal traffic areas of the facility for litter **daily**. The property boundaries shall be inspected for litter **at least weekly**. Litter shall be collected and disposed of in the Class I landfill, **at least once per day**, or more often as necessary. In the event that the litter control program is ineffective, the operator shall notify the Department, and implement additional litter control measures within 30 days.

i. In the event of fire, hurricane or other severe natural event, inoperable equipment, lack of qualified personnel, or stormwater control problems which allow prolonged (greater than 72 hours) contact of ponded water with waste, the facility shall cease disposing waste in the affected area until appropriate drainage has been restored.

j. <u>Equipment</u>. In the event of equipment breakdown or scheduled maintenance, the owner or operator shall ensure that sufficient reserve equipment is operating at the site **within 48 hours** of the occurrence [ref. SC#A.2.a(1), §L.2.b.1.]. In the event that sufficient reserve equipment is not obtained within 48 hours, the permittee shall notify the Department in accordance with Specific Condition #C.6.b., below and provide a schedule for corrective actions.

k. <u>Fires.</u> In the event of a fire which requires offsite assistance from the local fire protection authorities, the Department shall be notified pursuant to Specific Condition #C.6.b. below, and the owner or operator shall cease disposal of waste in the affected area until the fire has been completely extinguished, or as otherwise specified by the Department. Trenches cut into the waste shall not be used to extinguish the fire without prior Department approval.

2. Operating Personnel.

a. The owner or operator shall be responsible for operating and maintaining the facility in an orderly, safe, and sanitary manner.

(Specific Condition #C.2., cont'd)

b. Sufficient trained personnel shall be available, to adequately operate the facility in compliance with this permit and Department rules. As required by Rule 62-701.500(1), F.A.C., at least one trained operator shall be at the Class I landfill at all times when the landfill receives waste. At least one trained spotter shall be at the working face when waste is received and unloaded, to inspect each load of waste from the ground (while off of the equipment), and to identify and properly manage prohibited materials.

c. The permittee shall notify the Department in writing of a change of the County's primary on-site supervisor within 7 days of the effective start date of this new responsible individual. Training documentation shall be maintained at the landfill site, and copies shall be provided to the Department upon request.

3. **Control of Access**. Access to, and use of, the facility shall be controlled as required by Rule 62-701.500(5), F.A.C. Adequate access to the working face shall be provided for all weather conditions while the facility is receiving waste for disposal.

4. Monitoring of Waste.

a. Wastes shall be monitored as required by Rule 62-701.500(6), F.A.C., including a load checking program and associated activities. The owner or operator shall conduct three random load checks per week at the active working face. Documentation of the three random load checks, including descriptions (type and quantity) of unacceptable wastes discovered, shall be maintained on-site, and copies provided to the Department upon request. Load checks shall document the occurrence, type of unacceptable wastes, removal and disposition of unauthorized wastes discovered in the loads.

b. The permittee shall not accept hazardous waste or any hazardous substance at this site. Hazardous wastes are wastes listed in 40 CFR 261 Subpart D as hazardous or are wastes characterized in 40 CFR 261 Subpart C as hazardous. Hazardous substances are those defined in Section 403.703, Florida Statute or in any other applicable state or federal law or administrative rule. Sludges or other wastes which may be hazardous should be disposed of in accordance with Rules 62-701.300(4) and 62-701.500(6)(b), F.A.C. In the event that hazardous wastes are discovered, the Department shall be notified in accordance with Specific Condition #C.6.

(Specific Condition #C.4., cont'd)

c. The permittee shall maintain a program which prohibits the disposal of bulk industrial wastes which operating personnel reasonably believe to either be or contain hazardous waste, without first obtaining a chemical analysis of the material showing the waste to be non-hazardous. The chemical analysis of any such material so placed in the landfill, along with the customer's name and date of disposal, shall be kept on file by the operating authority on-site.

d. Sludges generated from onsite processes (e.g., stormwater or leachate system maintenance) shall be dewatered and adequately characterized as nonhazardous prior to disposal.

5. Control of Nuisance Conditions.

a. The owner or operator shall control odors, vectors (mosquitoes, other insects, rodents), and fugitive particulates (dust, smoke) arising from the operation so as to protect the public health and welfare. Such control shall minimize the creation of nuisance conditions on adjoining property. Complaints received from the general public, and confirmed by Department personnel upon site inspection, shall constitute a nuisance condition, and the permittee must take immediate corrective action to abate the nuisance.

b. In the event that the odor control measures performed at the facility, do not sufficiently abate objectionable odors offsite, the owner or operator shall submit an odor abatement plan to the Department within sixty (60) days of initial detection. The odor abatement plan shall include at a minimum, a description of the proposed corrective actions and a schedule for implementation.

6. Facility Maintenance and Repair.

a. The site shall be properly maintained including maintenance of access roads to disposal areas, equipment, stormwater and leachate management systems, cover systems and berms, gas monitoring system, surface water monitoring system, and groundwater monitoring system. Erosion and ponded water in disposal areas shall be prevented.

b. In the event of damage to any portion of the landfill site facilities, unauthorized leachate discharge, failure of any portion of the landfill systems (including damaged or dry groundwater monitoring wells), fire, explosion, the development of sinkhole(s) or other subsurface instability at the site, the permittee shall **immediately (within 24 hours)** notify the Department explaining such occurrence and remedial measures to be taken, method to prevent reoccurrence, and time needed for repairs. Written, detailed notification shall be submitted to the Department within seven (7) days following the occurrence. Routine maintenance does not require notification but shall be noted on daily reports.

Page 13 of 39.

(Specific Condition #C.6., cont'd)

c. In the event that any portion of the groundwater monitoring system is damaged or unable to be sampled, corrective actions shall be completed **within sixty (60) days** of the written notification specified in Specific Condition #C.6.b., unless otherwise approved by the Department. Corrective actions which include relocation or installation of new groundwater monitoring wells shall be in accordance with Specific Condition #E.5., or as otherwise approved by the Department.

d. In the event that the stormwater or leachate management systems are damaged or are not operating effectively, corrective actions shall be implemented within thirty (30) days of the written notification specified in Specific Condition #C.6.b., unless otherwise approved by the Department.

e. Intermediately covered areas, or areas which discharge to the stormwater management system, which exhibit significant erosion shall be repaired as indicated in the Operation Plan, §L.7.k. [ref. SC#A.2.a(1)], and this specific condition. For the purposes of compliance with this Specific Condition, "significant" means that:

1) The soil cover materials have eroded such that greater than 50% of the soil cover in that location has been eroded. **Repair within 7 days of detection**; or

2) Waste or liner is exposed. Repair within 48 hours of detection, or by the close of the next business day, whichever occurs first.

f. Areas which have received final cover, and which exhibit significant erosion as defined above, shall be repaired within 72 hours of detection.

g. <u>Settlement.</u> Areas which exhibit settlement (low spots and improperly graded areas) that may cause ponding of water shall be repaired (additional soil placed, regraded, seeded and/or sodded) within seven (7) days.

7. Stormwater Management.

a. This site shall have a surface water management system designed, constructed, operated, and maintained to prevent surface water from running onto waste filled areas, and a stormwater runoff control system designed, constructed, operated, and maintained to collect and control stormwater to meet the requirements of Chapter 62-330, F.A.C., Rule 62-701.500(10), F.A.C., and any other applicable Department rules or requirements of the water management district.

b. The permittee shall operate the facility, maintain grades, or utilize berms and swales, to prevent ponded water within the disposal areas.

(Specific Condition #C.7., cont'd)

c. All stormwater conveyance structures, inlets, overflow structure, and ponds shall be inspected weekly and following all storm events of 0.5 inches or greater [ref. Operation Plan, §L.2.h.3.]. Documentation of the findings of these inspections shall be kept and a copies of this documentation available for Department inspection upon request.

8. Leachate Management.

a. Leachate shall be managed in accordance with the requirements of Rule 62-701.500(8), F.A.C., the *Operation Plan* [ref. SC#A.2.a(1)], and other applicable Department rules.

b. Leachate and potentially contaminated stormwater which has accumulated in low areas within the disposal area shall be removed **daily** for disposal, and <u>shall not be</u> recirculated into the landfill as described in the *Operation Plan* [ref. SC#A.2.a(1), see §L.2.h.3. and Attachment L-3, Figures L-6 and L-7]. In the event that permittee elects to recirculate leachate into the landfill, a minor modification shall be requested pursuant to Specific Condition #A.3.

c. <u>Leachate Collection and Removal System (LCRS)</u> Inspections/Maintenance.

> Between July 15, 2009 and December 15, 2009, an 1) inspection (videotape or other appropriate assessment as approved by the Department) of the leachate collection system (LCS) shall be conducted. A report for this inspection shall include an evaluation of the effectiveness of the system, the location (indicated on a Site Plan drawn to scale) and cause of all obstructions encountered, proposed corrective actions and schedule for implementation of corrective actions as appropriate. The permittee shall retain a copy of the videotape at the facility for reference. No later than January 15, 2010, a final report summarizing the inspection results (with a copy of the inspection report) and describing the related corrective actions (repairs) if required (with photographic documentation for all repairs and a copy of the inspection videotape) shall be submitted to the Department to verify adequate performance of the leachate collection and removal system. The final report shall be signed and sealed by a professional engineer. The permittee shall retain a copy of the final report, each inspection report and inspection videotape at the facility for reference, and shall provide a copy to the Department upon request.

2) Unless otherwise specified in this permit, the leachate collection and removal system components shall be inspected and maintained as described in the *Operation Plan* [ref. SC#A.2.a(1)].

(Specific Condition #C.8(c), cont'd)

3) The leachate level indicators at the leachate `storage tank shall be inspected **at least once each business day**, or more frequently if needed, to ensure proper operation.

4) The operation of each pump, related sensors and controller mechanisms, and pump stations shall be verified on each operating day. Pumps showing reduced performance shall be removed for maintenance and repair, and a replacement pump installed if required for continued compliance.

5) In the event that the pumps, pump stations or level sensors are not operating as designed, the Department shall be notified in accordance with Specific Condition #C.6.b. Otherwise, documentation of all inspections shall be kept on file at the facility, and provided to the Department upon request.

6) Upon the discovery of any defective (obstructed, separated, deformed) portion of the leachate collection system, the disposal of waste in the affected area shall cease in the affected area until the leachate collection system performance has been restored. Construction of improvements to any part of the LCRS, including significant repairs to the leachate collection system, may require a permit modification pursuant to Specific Condition #A.3. The design and related supporting documents for the construction of improvements shall be substantially equivalent to those required for new construction.

7) Leachate tank inspections.

a) The exposed exterior of the leachate storage tank shall be inspected **at least weekly** for defects, leaking and other deficiencies. The containment area, truck loadout area, and other leachate tank system appurtenances shall be inspected at least <u>daily</u> for leakage or other damage.

b) Within sixty (60) days of the date of issuance of this permit, the permittee shall provide a copy of the interior tank inspection report that was conducted in 2004.

(Specific Condition #C.8(c)(7), cont'd)

The leachate storage tank system shall be C) inspected as required by Rule 62-701.400(6)(c)9., F.A.C., and in accordance with the conditions of this permit. No later than February 1, 2007 and February 1, 2010, the interior of the tank shall be inspected. A copy of the inspection report shall be submitted to the Department within 30 days of the inspection. In the event that deficiencies are noted in the inspection report, within fifteen (15) days of the owner's receipt of the written inspection report, the owner or operator shall propose corrective measures (including a schedule for implementation) to the Department. The deficiencies shall be corrected in accordance with the schedule approved by the Department.

d) Liquids that accumulate in the tank secondary containment area shall be tested as described in the *Operation Plan* [ref. SC#A.2.a(1)], Section L.2.h.2. Records of these test results shall be maintained on-site and provided to the Department upon request.

d. Leachate quantities.

1) In the event of a failure of leachate metering or pumping equipment which is not corrected within 24 hours of detection, the Department shall be notified, and corrective actions implemented in accordance with Specific Condition #C.6.

2) Leachate generation reports shall be compiled monthly and submitted to the Department **quarterly**, by January 15th, April 15th, July 15th and October 15th each year. Leachate generation reports shall include precipitation amounts, the number of open, intermediate and closed acres, leachate levels (elevations) in the leachate piezometer, and the quantities of leachate collected, stored, and hauled offsite to a wastewater treatment facility.

e. No later than **thirty (30) days** prior to the expiration of any contracts or agreements for the disposal of leachate at wastewater treatment facilities, the permittee shall provide a copy of the contract renewal or the issuance of a new contract for leachate disposal.

(Specific Condition #C.8., cont'd)

f. In the event that the primary leachate disposal facility becomes unable or unwilling to accept leachate for disposal, within three (3) days of the cessation of leachate acceptance by the POTW, the landfill owner or operator shall notify the Department and shall explain the contingency measures which will be implemented. The contingency measures shall be implemented within seven (7) days of the cessation of leachate acceptance at the POTW or in accordance with an alternate schedule approved by the Department.

g. The Class I disposal area shall be operated to limit the leachate head to one foot above the liner as described in Section L.8. of the Operations Plan.

9. **Special Wastes.** The design, operation, and monitoring of disposal or control of any "special wastes" shall be in accordance with the **Operation Plan** [ref. SC#A.2.a(1), Figure L-1, §L.2.c., and Landfill Recycling Plan, Attachment L-13] and with Rules 62-701.300(8) and 62-701.520, F.A.C., and any other applicable Department rules, to protect the public safety, health and welfare. The special wastes shall be stored and managed such that residues or other contaminants are not spilled, leaked, dumped, or otherwise discharged onto the soil or into surface or groundwaters. The special wastes shall be handled on a first-in, first-out basis. The special wastes shall be stored in a location which does not interfere with the sequence of filling.

a. Wastes which may include residual contaminants (such as gasoline, oil, paint, antifreeze, PCBs, etc.) shall be stored and managed such that the residues or constituents thereof are not spilled, leaked, dumped, or otherwise discharged onto the soil or into surface or groundwaters.

b. Special wastes (such as lead acid batteries, white goods, etc.), found at the working face, shall be stored in locations which do not adversely affect the sequence of filling, and shall be managed as described in the *Operations Plan*. These wastes shall be removed from the site for proper recycling or disposal at the frequency described in the *Operation Plan* and this permit, unless another frequency for removal is approved in writing by the Department.

c. <u>Asbestos.</u> Asbestos shall be managed in accordance with Rule 62-701.520(4), F.A.C., the *Operation Plan*, and all other applicable federal and Department rules. The asbestos shall be covered by a minimum of six (6) inches of soil or a suitable thickness of other materials to prevent the rupture of the asbestos bags prior to additional loads of waste being disposed in the same location.

(Specific Condition #C.9., cont'd)

d. <u>Contaminated Soil</u>. Contaminated soil shall be disposed within the working area and shall have representative analytical results demonstrate that the material is not hazardous and that the material has been adequately dewatered prior to delivery so that the material passes the paint filter test.

e. <u>White Goods and lawn mowers</u>. The white goods shall be removed from the site **at least monthly (every 30 days)**. White goods which may contain chlorofluorocarbons (CFCs, such as freon), shall be stored and managed in a manner such that the CFCs are not discharged to the atmosphere. White goods which have had the refrigerant appropriately removed, and lawn mowers that have had oil and gasoline appropriately removed, shall be clearly marked. A maximum of 1250 (total) white goods and lawn mowers may be stored at the site at any time.

f. Lead acid batteries. Lead acid batteries shall be removed from the site **at least monthly (every 30 days).** The batteries shall be stored in a manner which prevents the discharge of contaminants to the environment. A maximum of 30 lead acid batteries may be stored onsite at any time.

g. <u>Yard Waste</u>. Yard waste shall be managed in accordance with the Operations Plan, Rule 62-701.320, F.A.C., and the facility's yard trash processing Facility registration. Bagged yard trash or land clearing debris shall not be mulched at the site unless the bags are removed prior to mulching. Mixtures of mulched yard trash/land clearing debris and soil may be used for sideslope stabilization and erosion control in the Class I Landfill.

h. <u>Tires.</u> Waste tires shall be removed from the working face and shall be stored as shown on Figure L-1. Waste tires shall be managed in accordance with permit #126775-001-WT, or its successors, and shall be stored in a manner which prevents nuisance conditions and vectors (i.e. mosquitoes, rats, etc.).

i. <u>Electronics</u>. Electronics to be recycled shall be stored in an undamaged condition, and removed at least **monthly (every 30 days)**. Electronics that have been damaged (i.e., broken) shall be removed and stored in a covered containment area to prevent contact with rainfall and related discharge, and removed at least **monthly (every 30 days)**. A maximum of 1000 electronic devices may be stored at the site at any time.

j. <u>Household Hazardous Waste (HHW)</u>. Household hazardous waste shall be managed in accordance with the *Operations Plan* [ref. SC#A.2.a(1), Figure L-1, §L.2.c.] and shall be removed from the site for proper disposal **at least monthly**.

1) HHW shall be identified, and then segregated for storage within the containment areas by the end of each working day.

Page 19 of 39.

(Specific Condition #C.9.j., cont'd)

2) Spillage shall be removed and properly packaged for disposal. Soils which have been contaminated by spills shall be removed and packaged for proper disposal on the same day as the spill occurred.

3) Liquids, including contaminated rainwater, shall not be discharged outside of the containment structures.

4) HHW received at the facility shall be stored within containment areas at all times.

k. <u>Citizen Convenience Center</u>. The Citizen Convenience Center shall be constructed and operated as described in the *Operation Plan* [ref.SC#A.2.a(1) and A.2.e.].

10. Waste Handling Requirements. All solid waste disposed of in the Class I landfill shall be covered as required by Rule 62-701.500(7), F.A.C.

a. <u>Initial Cover</u>. Initial cover shall be applied and maintained at the end of each working day in the Class I landfill in accordance with Rule 62-701.500(7)(e), F.A.C., so as to protect the public health and welfare.

1) All solid waste disposed of in the Class I landfill must be covered with at least 6 inches of compacted earth or other suitable material as approved by the Department (in writing), at the end of each working day. Working areas which have received initial cover and exhibit erosion which results in exposed waste shall be repaired **by the end of the next working day**.

2) Materials which have been previously used for intermediate or initial cover shall not be re-used for intermediate cover <u>unless</u> the materials were separated from the waste by a minimum 6-inch initial cover and did not contact waste or leachate. These materials may be re-used as initial cover provided the runoff from these areas is managed as leachate.

3) Runoff from areas with initial cover may be considered uncontaminated stormwater <u>only if</u> the area

a) is adequately covered with a tarp or rain cell cover; **OR**

b) has 6-inches of soil (not ADCM) cover with no visible waste exposed, AND

- c) has no evidence of leachate seepage, AND
- d) has no evidence of erosion.

(Specific Condition #C.10., cont'd)

b. <u>Intermediate Cover</u>. Intermediate cover shall be applied and maintained in accordance with Rules 62-701.500(7)(a) and (f), F.A.C. Cover materials other than soil (unless identified herein) shall not be used for intermediate cover without prior written Department approval.

1) An intermediate cover of 12 inches of compacted soil in addition to the six (6) inch initial cover shall be applied within seven (7) days of cell completion if final cover or an additional lift is not to be applied within 180 days of cell completion.

2) Contaminated soils shall not be used for intermediate cover. These materials may be used for initial cover provided the runoff from these areas is managed as leachate. Analyses of the contaminated soils which demonstrate that the soils are not hazardous shall be maintained on-site, and copies provided to the Department upon request.

3) A mixture of soil and screened compost or mulch (1/2 inch screen, 25% soil, 75% compost/mulch) may be used for intermediate cover [ref. *Operation Plan*, §L.7.g.].

4) Sod shall be applied within 30 days to all intermediately covered (external) sideslope areas that have reached designed dimensions.

с. Alternate daily (initial) cover materials (ADCM) shall be approved by the Department prior to use at the facility. For those areas where solid waste will be deposited on the working face within 18 hours, the following materials are approved for use as alternate initial cover: tarps; tire chips; 50/50 mixtures of soil/mulch or soil/compost; 50/50 mixtures of shredded asphalt shingles and soil; shredded C&D debris or RSM [see Operation Plan, §L.2.g., §L.7., §L.7.e., and Attachment L-10]. Other Department- approved ADCM may be used as initial cover only, but shall not be used outside of lined areas without specific prior Department approval. Yard trash (compost or mulch), screened or unscreened, and then mixed in the ratio of 50% compost (or mulch) to 50% soil, and applied in a six (6) inch compacted layer, may be used as initial or intermediate cover. The processed yard trash shall not contain particles greater than six inches and shall not contain plastic.

11. Working Face.

a. As required by Rule 62-701.500(7)(d), F.A.C., the permittee shall minimize the size of the working face to minimize leachate, and unnecessary use of cover material. The permittee shall maintain the working face of a cell only wide enough to efficiently accommodate the maximum quantity of vehicles discharging waste simultaneously and to minimize the exposed area.

Page 21 of 39.

(Specific Condition #C.11., cont'd)

b. Waste shall be spread and compacted in accordance with the *Operation Plan*. Slopes shall be maintained in accordance with the *Operations Drawings*. The working face and all above grade slopes shall be no greater (steeper) than **3H:1V** [ref. SC#A.2.a(1), §L.2.f.].

c. Berms and/or swales shall be maintained to prevent leachate runoff from the working face from entering the stormwater management system. Runoff from outside the working face area will not be considered stormwater if the flow passes over areas which have not been intermediately covered as defined by Rule 62-701.200(55), F.A.C., and stabilized to control erosion.

12. Method and Sequence of Filling.

a. The method and sequence of filling shall be in accordance with Operations Drawings [ref. SC#A.2.b.], and as described in the Operation Plan [ref. SC#A.2.a(1)], or as otherwise approved in writing by the Department.

13. Reuse of Leachate for Dust Control.

a. Small quantities of leachate may be reused within the active cells as an alternate dust control measure in accordance with Section L.11.d., of the Operation Plan [ref. SC #A.2.a(1)]. The landfill operator shall monitor the rate of leachate application, soil (cover material) moisture conditions, and the specific landfill areas used to prevent the generation of leachate runoff. Leachate shall only be reused for dust control under the following conditions:

1) Leachate may only be sprayed on active, bermed, disposal areas, including the working face and areas with the required six (6) inches of initial cover with a maximum slope of 10H:1V;

2) Leachate shall not be sprayed on areas with intermediate or final cover or within 150 feet of a sideslope steeper than 4H:1V;

3) The areas receiving leachate shall be controlled at all times to prevent run-off from entering the stormwater system;

4) Leachate shall not be sprayed when the application area is in a saturated condition (as evidenced by ponding water or pumping soils) or during a rainfall event;

5) The application rate of leachate must be such that the leachate does not accumulate on the landfill surface but infiltrates quickly into the covered refuse;

(Specific Condition #C.13.a., cont'd)

6) Leachate shall not be sprayed at the end of the day on the initial cover of the working face or other areas. Spraying shall be done early in the morning after any dew evaporates and continue until early afternoon or until all available areas have been utilized; and

7) Leachate shall not reused or sprayed outside the lined disposal area.

b. The following shall be recorded each day leachate is reused for dust control:

1) Quantity of leachate sprayed (gal/day);

2) Rainfall onsite (inches/day and time/duration of rainfall occurrence); and

3) Observed runoff of leachate to retention area (yes/no, inspection time and quantity if yes).

SPECIFIC CONDITIONS: PART D - Recordkeeping

1. **Report submittals.** Unless otherwise specified, all submittals, notifications, requests for permit modification, reports for compliance with this permit, etc. shall be sent to: Solid Waste Section, Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

2. Operation Plan and Operating Record.

a. Each landfill owner or operator shall have an operational plan which meets the requirements of Rule 62-701.500(2), F.A.C. A copy of the Department approved permit, operational plan, construction reports and record drawings, and supporting information shall be kept at the facility at all times for reference and inspections. Operating records as required by Rule 62-701.500(3), F.A.C., are part of the operations plan, and shall also be maintained at the site.

b. Proposed changes to the current Department-approved Operation Plan [ref.SC#A.2a(1)] shall be submitted in writing to the Department for review and may require a permit modification in accordance with Specific Condition #A.3. The Operation Plan shall be updated as operations change and for renewal of the permit. Revised pages shall be provided as replacement pages with revisions noted (deletions may be struckthrough (struckthrough) and additions may be shaded (shaded) or a similar method may be used) and each page numbered with the document title and date of revision.

c. Unless specified otherwise in this permit, all submittals, notifications, requests for permit modification, etc. shall be provided to the Southwest District Solid Waste Section, 3804 Coconut Palm Drive, Tampa, Fl. 33619.

d. The following reports, documents and other information shall be kept at the facility for reference, and copies shall be provided to the Department upon request:

1) Waste quantity reports required by Rule 62-701.500(4), F.A.C.

2) A log of the facility operator's daily and weekly inspections, and any subsequent corrective actions;

3) Load checking records;

4) A list of incidents of disposal of contaminated soil or other industrial wastes or sludges. This list should include the generator's name and address, and a description of the waste disposed; and

5) Operator and spotter training certificates and other documentation;

6) Log of odor complaints and corrective action; and

Page 24 of 39.

SPECIFIC CONDITIONS: PART D - Recordkeeping

(Specific Condition #D.2.d., cont'd)

7) Records as described in Rule 62-701.500(13). These records shall include all certifications for construction completion.

8) Log of discharges from leachate storage tank secondary containment area [ref. Operation Plan, §L.2.h.2.].

e. <u>Capacity Report.</u> The owner or operator shall conduct a topographic survey of, and shall estimate the remaining disposal capacity and site life of each disposal area as required by Rule 62-701.500(13)(c), F.A.C. **Annually, no later than April 15th each year,** a copy of this survey, supporting capacity calculations, signed and sealed by a registered professional engineer and/or licensed professional land surveyor as appropriate shall be submitted to the Department. The survey shall demonstrate that the above-grade sideslopes are no greater than the design exterior sideslopes (3H:1V), that the top elevation does not exceed design elevation, and that all other design features and related improvements conform to the Department-approved **Operations Drawings**.

3. Waste Records.

a. Waste records shall be maintained as required by Rule 62-701.500(4), F.A.C. The owner or operator of the facility shall weigh each load of waste as it is received (with scales at the facility) and record, in tons per day, the amount of waste debris and material received. This information shall be compiled **monthly** and submitted to the Department (Solid Waste Section, Department of Environmental Protection, 2600 Blair Stone Road, M.S. 4565, Tallahassee, Florida 32399-2400) **quarterly, by January 15th, April 15th, July 15th and October 15th of each year**. Waste shall not be accepted for disposal at the landfill unless weight scales are available at the facility and are in proper working condition.

b. Records shall be kept for all recycled electronics, including the quantities sent to each recycler, and related receipts with the name and address of each recycler.

4. **Financial Assurance.** The permittee shall provide adequate financial assurance for this facility and related appurtenances in accordance with Rule 62-701.630, F.A.C.

a. All costs for closure shall be adjusted and submitted for approval **annually, by September 1st each year** to: Solid Waste Manager, Solid Waste Section, Department of Environmental Protection, 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

SPECIFIC CONDITIONS: PART D - Recordkeeping

(Specific Condition #D.4., cont'd)

b. Proof that the financial mechanism has been adequately funded shall be submitted **annually** to: Financial Coordinator, Solid Waste Section, Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

5. Closure Plan. No later than ninety (90) days prior to the date when wastes will no longer be accepted in the active landfill, the owner or operator shall submit an updated closure and long term care plan to the Department to reflect any changes in the Closure and Long Term Care Plan due to actual operational conditions at the facility. PERMITTEE:Sarasota Course Solid Waste Operations Mr. Gary Bennett, General Mgr.

SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

1. Water Quality Monitoring Quality Assurance.

a. All field work done in connection with the facility's Water Quality Monitoring Plan shall be conducted in accordance with the Standard Operating Procedures (SOPs) described in DEP-SOP-001/01 (February 1, 2004), as referenced in Rule 62-160.210(1), F.A.C. All laboratory analyses done in connection with the facility's Water Quality Monitoring Plan shall be conducted by firms that hold certificates from the Department of Health Environmental Laboratory Certification Program under Chapter 64E-1, F.A.C., as referenced in Rule 62-160.300(1), F.A.C. The SOPs utilized and the laboratory's list of certified test methods and analytes must specifically address the types of sampling and analytical work that are required by the permit and shall be implemented by all persons performing sample collection or analysis related to this permit. Alternate field procedures and laboratory methods may be used if approved according to the requirements of Rules 62-160.220 and 62-160.330, F.A.C., respectively.

b. The field testing, sample collection and preservation, and laboratory testing, <u>including the collection of quality control</u> <u>samples</u>, shall be in accordance with the requirements of and methods approved by the Department in accordance with Rule 62-4.246 and Chapter 62-160, F.A.C. Approved methods published by the Department or as published in Standard Methods, or by A.S.T.M., or EPA methods shall be used.

2. Zone of Discharge.

a. The zone of discharge for this landfill shall extend horizontally 100 feet from the limits of the landfill liner or to the property boundary, whichever is less, and shall extend vertically to the bottom of the surficial aquifer.

b. The permittee shall ensure that the water quality standards and minimum criteria for Class G-II ground waters will not be exceeded at the boundary of the zone of discharge according to Rule 62-520.420, F.A.C., and that the minimum criteria listed in Rule 62-520.400, F.A.C., will not be exceeded outside the footprint of the landfill.

3. Ground Water Monitor Well Locations. The ground water monitoring plan is described in the submittal entitled <u>Groundwater Monitoring Plan Addendum</u>, <u>Central County Solid Waste Disposal Complex</u>, Sarasota County, Florida [ref.SC# A.2.a(2)]. The active monitor well locations for the facility shown on Figure L-1, prepared by SCS Engineers, received November 18, 2004 (attached), are described as follows:

	WACS Testsite			
<u>Well No.</u>	ID No.	Aquifer	Designation	Location
MW-1R *	20585	Surficial	Background	See Figure
L-1			-	-
MW-2R *	20586	Surficial	Background	Û
MW-4R *	20587	Surficial	Background	Û
MW-8A *	21455	Surficial	Detection	Û
MW-9	4509	Surficial	Detection	Û
MW-10R	4510	Surficial	Detection	Û
MW-11R *	20588	Surficial	Detection	Û
MW-12R *	20589	Surficial	Detection	Û
MW-1 **	4501	Surficial	Abandoned	Û
MW-2 **	4502	Surficial	Abandoned	Û
MW-4 **	4504	Surficial	Abandoned	Û
MW-8 **	4508	Surficial	Abandoned	Û
MW-11 **	4511	Surficial	Abandoned	Û
MW-12 **	4512	Surficial	Abandoned	Û
MW-3	4503	Surficial	Piezometer	Û
MW-5	4505	Surficial	Piezometer	Û

* = to be installed within 90 days of permit issuance in accordance with the construction details provided in Tables 4-1a and 4-1b of the <u>Groundwater</u> <u>Monitoring Plan Addendum</u> dated June 28, 2002, revised July 24, 2002, except for the construction details for well MW-8A provided in the SCS Engineers letter dated and received November 18, 2004; documentation of well construction details as indicated in Specific Condition No. E.5.b., shall be submitted within 30 days of well installation; initial sampling shall be conducted within 7 days of well installation and development in accordance with Specific Condition No. E.4.b.; results of initial sampling shall be submitted within 30 days of receipt from the analytical laboratory.

** = to be abandoned within 90 days of permit issuance; documentation of well abandonment as indicated in Specific Condition No. E.6., shall be submitted within 30 days of well abandonment.

An updated survey drawing as described in Specific Condition No. E.5.d., shall be submitted within 30 days of installation of the proposed wells (MW-1R, MW-2R, MW-4R, MW-8A, MW-11R and MW-12R); this drawing shall <u>also</u> include the locations and elevations for the <u>existing</u> wells (MW-9 and MW-10R) and piezometers (MW-3 and MW-5) to comply with the responses to review comments provided in the letter prepared by SCS Engineers dated March 31, 2004.

All wells are to be clearly labeled and easily visible at all times. The permittee should keep all wells locked to minimize unauthorized access.

4. Ground Water Sampling. The locations, parameters, and frequencies specified herein represent the minimum requirements for ground water monitoring. Additional samples, wells, and parameters may be required based upon subsequent analysis. Method Detection Limits must be reported at or below the Maximum Contaminant Levels established for the individual parameters to demonstrate compliance with Class G-II ground water standards referenced in Chapter 62-520, F.A.C. Compliance with ground water standards will be based on analysis of unfiltered samples.

a. Ground water elevations shall be measured at all active wells and piezometers listed in Specific Condition No. E.3., for all sampling events described in Specific Condition Nos. E.4.b., E.4.c., and E.9.d., to a precision of 0.01 foot. The water surface contour maps prepared for each sampling event shall include ground water elevations (feet NGVD) calculated for each well and piezometer, and surface water elevations (feet NGVD) calculated for each pond.

b. An <u>initial</u> sampling event at wells MW-1R, MW-2R, MW-4R, MW-8A, MW-11R and MW-12R shall be conducted **within 7 days of well installation and development** for analysis of the following parameters:

Field Parameters	Laboratory Parameters		
Static water levels	Total ammonia - N	Calcium	
before purging	Bicarbonate	Iron	
Specific conductivity	Carbonate	Magnesium	
pH	Chlorides	Mercury	
Dissolved oxygen	Nitrate	Potassium	
Temperature	Sulfate	Sodium	
Turbidity	Total dissolved solids (TDS)		
Colors & sheens	Those parameters listed in		
(by observation)	40 CFR Part 258. Appendix II		

Results of initial sampling shall be submitted within 30 days of receipt from the analytical laboratory.

c. The background wells (MW-1R, MW-2R and MW-4R) and detection wells (MW-8A, MW-9, MW-10R, MW-11R and MW-12R) shall be sampled **semi-annually** for analysis of the following parameters:

Field Parameters	Laboratory Parameters		
Static water levels	Total ammonia - N	Calcium	
before purging	Bicarbonate	Iron	
Specific conductivity	Carbonate	Magnesium	
рН	Chlorides	Mercury	
Dissolved oxygen	Nitrate	Potassium	
Temperature	Sulfate	Sodium	
Turbidity	Total dissolved solids(TDS)		
Colors & sheens	Those parameters listed in		
(by observation)	40 CFR Part 258, Appendix I		

5. Ground Water Monitor Well Construction. The following information shall be submitted within 90 days of installation of <u>all</u> new or replacement wells, or as stated below:

a. <u>Prior to</u> construction of all new or replacement wells (<u>excluding</u> wells MW-1R, MW-2R, MW-4R, MW-8A, MW-11R and MW-12R) the permittee shall request and receive Department approval of a minor permit modification.

b. Construction details (record drawings) for <u>all</u> new or replacement wells and piezometers shall be provided to the Department's Southwest District Office on Department Form No. 62-522.900(3), Monitor Well Completion Form (**attached**).

c. Within one week of well completion and development, each new or replacement well shall be sampled for the parameters listed in Rules 62-701.510(8)(a) and 62-701.510(8)(d), F.A.C.

d. A surveyed drawing shall be submitted in accordance with Rule 62-701.510(3)(d)(1), F.A.C., showing the location of all monitoring wells and piezometers (active and abandoned), horizontally located in degrees, minutes and seconds of latitude and longitude, and showing the elevation of the top of the well casing to the nearest 0.01 foot, National Geodetic Vertical Datum. The surveyed drawing shall include the monitor well identification numbers, locations and elevations of all permanent benchmarks and/or corner monument markers at the site. The survey shall be conducted by a Florida Registered Surveyor.

6. Well Abandonment. All wells and piezometers not a part of the approved Water Quality Monitoring Plan and not listed in Specific Condition No. E.3., are to be plugged and abandoned in accordance with Rule 62-532.440, F.A.C., and the Southwest Florida Water Management District (SWFWMD). Documentation of abandonment shall include a map showing well/piezometer locations and SWFWMD abandonment records. The permittee shall submit a written report to the Department providing verification of the well abandonment within 30 days of abandonment. A written request for exemption to the abandonment of a well must be submitted to the Department's Solid Waste Section for approval.

7. Verification/Evaluation Monitoring. If at any time monitoring parameters are reported in the detection wells at concentrations significantly above background water quality, or exceed the Department's water quality standards or minimum criteria, the permittee has 30 days from receipt of the sampling results to resample the monitor well(s) to verify the original analysis. Should the permittee choose not to resample, the Department will consider the water quality analysis to be representative of current ground water conditions at the facility. If the data is confirmed, or if the permittee chooses not to resample, the permittee shall notify the Department within 14 days of this finding. Upon notification by the Department, the permittee shall initiate evaluation monitoring, prevention measures and corrective action as described in Rule 62-701.510(7), F.A.C.

8. Leachate Sampling. Leachate samples shall be collected from each landfill cell that contains waste ("active cell"). Representative leachate samples (<u>unfiltered</u>) shall be collected from the sampling ports at the leachate pump valve boxes for each active cell as shown on Figure L-1A prepared by SCS Engineers, received September 20, 2002 (attached):

	WACS Testsite
Landfill Cell	ID No.
Cell No. 1	20580
Cell No. 2	20581
Cell No. 3	20582
Cell No. 4	20583
Cell No. 5	20584
	Landfill Cell Cell No. 1 Cell No. 2 Cell No. 3 Cell No. 4 Cell No. 5

Leachate sampling shall be conducted in accordance with the Department's SOPs to comply with the requirements of Rules 62-701.510(5) and 62-701.510(6)(c), F.A.C. A composite leachate sample may be prepared from the samples collected from the leachate sampling ports at each active cell for analysis of the *inorganic parameters only* in accordance with the procedure described in Section 2 of the Groundwater Monitoring Plan Addendum, [ref. SC#A.2.a(2)]. Otherwise, individual leachate samples shall be collected from the leachate sampling ports for each active cell for analysis of the following parameters:

a. Semi-annual leachate sampling shall be conducted for analysis of the following parameters:

Field Parameters	Laboratory Parameters		
Specific conductivity	Total ammonia - N	Calcium	
рH	Bicarbonate	Iron	
Dissolved oxygen	Carbonate	Magnesium	
Colors & sheens	Chlorides	Mercury	
(by observation)	Nitrate	Potassium	
	Sulfate	Sodium	
	Total dissolved solids (TDS)		

b. Annual leachate sampling shall be conducted <u>during the second</u> <u>half of each year</u> for analysis of the parameters listed in Specific Condition No. E.8.a., <u>plus the parameters listed in 40 CFR Part</u> 258, Appendix II.

c. If the leachate analyses indicate that a contaminant listed in 40 CFR Part 261.24 exceeds the regulatory level listed therein, the permittee shall initiate monthly sampling and analysis of the parameters listed in Specific Condition No. E.8.b., and shall notify the Department in writing. Results of the monthly leachate sampling shall be submitted within 30 days of receipt from the analytical laboratory. If in any three consecutive months no listed contaminant is found to exceed the regulatory level, the permittee may discontinue the monthly sampling and analysis and return to a routine sampling schedule.

Page 31 of 39.
SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

9. Surface Water Sampling.

a. All surface water bodies that may be affected by a contaminant release at the facility shall be monitored, except bodies of water contained completely within the property boundaries of the site which do not discharge from the site to surface waters (Rule 62-701.510(4), F.A.C.). The locations, parameters, and frequencies specified herein represent the minimum requirements for surface water monitoring. Additional samples, sampling locations, and parameters may be required based upon subsequent analysis. Method Detection Limits must be less than or equal to the criteria for each parameter established in Chapter 62-302, F.A.C., to demonstrate compliance with Class III (predominantly fresh water) surface water standards. Compliance with surface water criteria will be based on analysis of <u>unfiltered</u> samples.

b. Surface water elevations shall be measured at the staff gauges located in Pond Nos. 1 through 7 as shown on Figure L-1 prepared by SCS Engineers, received September 2, 2004 (attached), to a precision of 0.01 feet for all sampling events described in Specific Condition Nos. E.4.b., E.4.c., and E.9.d.

c. Surface water sample collection points shall be located as shown on Figure L-1 prepared by SCS Engineers, received November 18, 2004 (attached), as follows:

Surface	WACS Testsite				
Water ID No.	ID No.	Location			
B2	4519	Old Cow Pen Slough, upstream location			
B4R	20060	Old Cow Pen Slough, downstream location			

In accordance with Rule 62-701.510(4)(c), F.A.C., the monitoring stations shall be marked and their positions shall be determined by a registered Florida land surveyor in degrees, minutes and seconds of latitude and longitude.

d. Semi-annual surface water sampling shall be conducted at station Nos. B2 and B4R in accordance with Rule 62-701.510(6)(e), F.A.C., for analysis of the following parameters:

Field parameters	Laboratory parameters		
Specific conductivity pH Dissolved oxygen	Chlorophyll A Total hardness Total phosphatos	Nitrate Total nitrogen	
Turbidity Temperature	Calcium Copper	Biochemical oxygen demand (BOD)	
Colors and sheens (by observation)	Iron Magnesium	Total organic carbon (TOC) Total dissolved solids (TDS)	
Surface water elevation	Mercury Potassium Sodium	Total suspended solids (TSS) Fecal coliform	
	Zinc	Carbonate Sulfate	
	Those parameters listed	d in 40 CFR Part 258. Appendix I	

SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

10. Water Quality and Leachate Reporting Requirements. All leachate, surface water and ground water guality monitoring results shall be reported on Department Form 62-522.900(2), Groundwater Monitoring Report (attached). The permittee shall submit to the Department the analytical results of the leachate samples (Specific Conditions Nos. E.8.a., and E.8.b.), surface water samples (Specific Condition No. E.9.d.) and ground water samples (Specific Condition No. E.4.c.) by January 15th and July 15th of each year for the semi-annual periods July-December and January-June, respectively. The reports that transmit the results of ground water analysis shall contain the information listed in Rule 62-701.510(9)(a), F.A.C., including a water surface contour map representing conditions at the time of ground water and surface water sampling and a summary of any water quality standards or criteria that are exceeded. The results shall be sent to: Solid Waste Section, Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-1352.

11. Monitoring Plan Evaluation. By February 1, 2007 and no later than August 1, 2009, the permittee shall submit an evaluation of the water quality monitoring data. The periods of time to be covered by the evaluations are summarized below:

Water Quality Monitoring Data Evaluation Due Date	Starting Sampling Event	Ending Sampling Event	
February 1, 2007	Second Half 2001	Second Half 2006	
August 1, 2009	First Half 2007	First Half 2009	

The evaluations shall include the applicable information as listed in Rule 62-701.510(9)(b), F.A.C., and shall include assessment of the effectiveness of the existing landfill design and operation as related to the prevention of ground water contamination. Any ground water contamination that may be reported shall be addressed as part of evaluation monitoring conducted at the facility in accordance with Rule 62-701.510(7), F.A.C. The evaluations shall be sent to: Solid Waste Section, Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-1352.

SPECIFIC CONDITIONS: PART F - Landfill Gas Management

1. Landfill Gas - NSPS and Title V Air Requirements.

a. This solid waste permit will meet the statutory requirement to obtain an air construction permit before modifying or constructing a source of air pollution, except for those landfills that are subject to the prevention of significant deterioration (PSD) requirements of Chapter 62-212, F.A.C. Facilities that are subject to the PSD requirements shall obtain an air construction permit from the Bureau of Air Regulation prior to beginning construction or modification pursuant to Rule 62-210.400, F.A.C.

b. The permittee shall comply with any applicable Title V air operation permit application requirements of Chapter 62-213, F.A.C., and 40 CFR 60, Subparts WWW and CC, as adopted by reference at Rule 62-204.800, F.A.C. Title V Permit applications shall be submitted to the District Air Program Administrator or County Air Program Administrator with air permitting authority for the landfill.

c. The permittee shall submit to the Division of Air Resources Management, Department of Environmental Protection, Mail Station . 5500, 3900 Commonwealth Blvd., Tallahassee, FL 32399-3000, any amended design capacity report and any Non-Methane Organic Compound (NMOC) emission rate report, as applicable, pursuant to 40 CFR 60.757(a)(3) and (b).

2. Gas Monitoring and Control.

a. Landfills that receive degradable wastes shall have a gas management system designed to prevent explosions and fires, and to minimize off-site odors, lateral migration of gases and damage to vegetation. Landfill gas shall be monitored and controlled as required by Rule 62-701.530, F.A.C.

b. Landfill gas shall be monitored to demonstrate compliance with the criteria established in Rule 62-701.530(1)(a), F.A.C., (less than 25% of the lower explosive limit (LEL) for combustible gases in structures and less than 100% of the LEL for combustible gases at or beyond the property boundary).

c. The results of quarterly monitoring required by Rule 62-701.530(2)(c), F.A.C., shall be submitted to the Department by the following dates:

Measured During	Report Submitted By
Quarter 1	April 15 th of each year
Quarter 2	July 15 th of each year
Quarter 3	October 15 th of each year
Quarter 4	January 15 th of each year

SPECIFIC CONDITIONS: PART F - Landfill Gas Management

3. Gas Monitoring Locations. The enclosed structures and gas monitoring locations shown on Figure L-1, prepared by SCS Engineers, received November 18, 2004 (attached), shall be sampled at least quarterly for concentrations of combustible gases determined as a percent of the LEL calibrated to methane, as described in Rule 62-701.530(2), F.A.C.

Monitoring		
Point	Location	Location Description
GP-1	Figure L-1	West boundary of landfill cells
GP-2	\hat{U}	North boundary of landfill cells
GP-3	$\hat{\mathbf{U}}$	East boundary of landfill cells
GP-7	Û	North of C&D processing area
GM-1	Û	Contractor's maintenance building and yard
GM-2	Û	C&D processing area
GM-3	Û	County maintenance building
GM-4	Û	Administration building
GM-5	Û	Scale house
GM-7	Û	Control panel at leachate storage facility

Gas monitoring probes GP-1, GP-2, GP-3 and GP-7 are to be clearly labeled and easily visible at all times.

4. Gas Remediation. If the results of gas monitoring show that combustible gas concentrations exceed 25% of the LEL calibrated to methane in structures or 100% of the LEL calibrated to methane at the property boundary, the permittee shall immediately take all necessary steps to ensure protection of human health and notify the Department. Within 7 days of detection, a gas remediation plan detailing the nature and extent of the problem and the proposed remedy shall be submitted to the Department for approval. The remedy shall be completed within 60 days of detection unless otherwise approved by the Department.

SPECIFIC CONDITIONS: PART G - Closure and Long-Term Care Requirements

1. Closure Permit Requirements. No later than ninety (90) days prior to the date when wastes will no longer be accepted for portions of the landfill which have reached closure design dimensions, the landfill owner or operator shall submit a closure permit application to the Department, to assure conformance with all applicable Department rules. A closure permit is required prior to implementing closure related activities.

2. Final Cover. Portions of the landfill which have been filled with waste to the extent of designed dimensions shall be closed (shall receive final cover) within 180 days after reaching design dimensions, in accordance with Rule 62-701.500(7)(g), F.A.C. and all applicable requirements of Department rules.

3. Long-Term Care Requirements.

a. The permittee shall perform long-term care for the facility in accordance with Rule 62-701.620, F.A.C., and the information referenced in Specific Condition #A.2.a.

b. Long-term care includes, but is not limited to, water quality, leachate and gas monitoring, maintenance of the final cover system, maintenance of the leachate collection and removal system, erosion control, and the prevention of ponding within disposal areas.

4. Use of Closed Landfill Areas.

a. There are no currently closed areas of the Class I landfill.

b. Use of closed landfill areas requires consultation with and approval by the Department **prior to** conducting these activities in accordance with Rule 62-701.610(7), F.A.C. The Department retains regulatory control over any activities which may affect the integrity of the environmental protection measures such as the landfill cover, drainage, final cover materials (soil and vegetation), leachate collection system, bottom liner, monitoring systems or stormwater controls. A plan detailing the proposed activities and evaluation of the potential effects on the landfill systems (including engineering designs, calculation and plans, as appropriate) shall be submitted for Department review to comply with the requirements of the Department's document entitled "Guidance for Disturbance and Use of Old Closed Landfills or Waste Disposal Areas in Florida", dated May 3, 2001, or successor document.

Executed in Tampa, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Deb Getzoff ah A. District Director Southwest District

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ATTACHMENT 1					
Specific Condition	Submittal Due Date	Required Item			
A.4. No later than January 15, 2010		Submit permit renewal application			
A.9.b.	Within 24 hours of discovery	Notification of sinkholes or subsurface instability			
	Within 7 days of verbal notification	Written notification & corrective action plan			
B.2.a.	Within 60 days of completion	Submit certification of construction completion, record drawings, etc.			
C.6.b.	Within 24 hours of discovery	Notification of: hazardous waste receipt, failure of landfill systems or equipment			
	Within 7 days of verbal notification	Written notification & corrective action plan			
C.6.c. Within 60 days of written notification		Complete corrective actions for gradient or groundwater monitoring system			
C.6.d. Within 30 days of written notification		Implement corrective actions for leachate management system \cdot			
C.8.c(1) No later than January 15, 2010		Submit final leachate assessment report, videotape, inspection results, etc.			
C.8.c(7)(b)	Within 60 days of permit issuance	Submit copy of tank inspection report for 2004			
C.8.c(7)(c) By February 1, 2007 and February 1, 2010		Conduct inspection of interior of tank			
C.8.d(2)	Quarterly, by January 15 th	Submit leachate generation reports			
F.2.c. April 15 th July 15 th October 15 th each year		Submit gas monitoring results			
D.2.e. Annually, by April 15 th each year		Submit Topographic survey & remaining capacity calculations			
D.4.a.	Annually, by September 1 st each year	Submit revised cost estimates			
D.4.b.	Annually	Submit proof of funding			

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ATTACHMENT 1					
Specific Condition	Submittal Due Date	Required Item			
E.3.	Within 90 days of permit issuance	Install wells MW-1R, MW-2R, MW-4R, MW- 8A, MW-11R, MW-12R			
E.3.	Within 30 days of installation	Provide well construction information			
E.3., E.4.b.	Within 7 days of well development	Conduct initial sampling for MW-1R, MW-2R, MW-4R, MW-8A, MW-11R and MW-12R			
E.3.	Within 30 days of receipt of results	Submit initial sampling results			
E.3.	Within 30 days of installation	Submit updated survey of all wells and piezometers			
E.4.c.	Semi-annually	Sample background, detection and downgradient wells			
E.5.a.	Prior to installation of new wells	Request permit modification, Provide construction details for wells			
E.5. Within 90 days of installation of new wells		Submit well construction details and survey			
E.5.c.	Within 1 week of well development	Conduct initial sampling			
E.6. Within 30 days of abandonment		Submit documentation of abandonment			
E.8.a.	Semi-annually	Conduct leachate sampling			
E.8.b.	Annually	Conduct leachate sampling			
E.9.d.	Semi-annually	Conduct surface water monitoring			
E.10.	Semi-annually, by January 15 th and July 15 th each year	Submit water quality monitoring analyses (SC#E.4.c., E.8.a., E.8.b., E.9.d.)			
E.11.	By February 1, 2007 and by August 1, 2009	Submit water quality monitoring plan evaluations			
F.4.	Within 7 days of detection	Submit gas remediation plan			
Within 60 days of detection		Complete corrective actions			
G.1.	No later than 90 days prior to the date when wastes will no longer be received	Submit Closure Permit application			



Figure L-1. Site Plan, Central County Solid Waste



Disposal Complex, Sarasota County, Florida.



Figure L-1A. Site Plan Showing Leachate Pump



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DEP Form # 62-522.900(3)

Form Title MONITOR WELL COMPLETION REPORT

Effective Date ____

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

DEP Application No._____ (Filled in by DEP)

MONITOR WELL COMPLETION REPORT

DATE:			
INSTALLATION NAME:		N2 (1.2011) (1.1	
DEP PERMIT NUMBER:	GMS NUMBER:		
WELL NUMBER:	WELL NAME:		· · · · ·
DESIGNATION: Background	Immediate	Compliance	
LATITUDE/LONGITUDE:		1	
AQUIFER MONITORED:			
INSTALLATION METHOD:			
INSTALLED BY:			
TOTAL DEPTH:	DEPTH OF SCREEN:		_ (bls)
SCREEN LENGTH:	SCREEN SLOT SIZE:	SCREEN TYPE:	
CASING DIAMETER:	CASING TYPE:		
LENGTH OF CASING:	FILTER PACK MATERIAL:	<u></u>	
TOP OF CASING ELEVATION (MSL):			
GROUND SURFACE ELEVATION (MSL):			
COMPLETION DATE:			
DESCRIBE WELL DEVELOPMENT:			
			<u>-</u>
POST DEVELOPMENT WATER LEVER ELEVATION (MSL)			
DATE AND TIME MEASURED:			
REMARKS: (soils information, stratigraphy, etc.) :			
		· · · · · · · · · · · · · · · · · · ·	
REPORT PREPARED BY:			
	(name, company, phone number)		

NOTE: PLEASE ATTACH BORING LOG.

(bis)= Below Land Surface



DEP Form #_ 62-522.900(2)
Form Title <u>Ground Water Monitoring</u> Report
Effective Date
DEP Application No.

Florida Department of Environmental Protection

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

GROUND WATER MONITORING REPORT

Rule 62-522.600(11)

PART I GENERAL INFORMATION

(1)	Facility Name		
	Address		
	City		Zip
	Telephone Number	()	
(2)	The GMS Identificat	tion Number	
(3)	DEP Permit Number	۲	
(4)	Authorized Represe	entative Name	
	Address		
	City		Zip
	Telephone Number	()	
(5)	Type of Discharge		
(6)	Method of Discharge	9	
(-)			
		Certification	
l ce all a that incl	ertify under penalty of I attachments and that, t the information is tru- uding the possibility o	law that I have personally examined and am familiar with the based on my inquiry of those individuals immediately respor le, accurate, and complete. I am aware that there are signific of fine and imprisonment.	information submitted in this document and sible for obtaining the information, I believe cant penalties for submitting false information,
Dat	e:		
		Signature of	Owner or Authorized Representative
P۵			
San	mple Organization	Comp OAP #	
Anc		Comp QAP # /URS Contification #	
And	alytical Lab		
		Comp QAP # /HRS Certification #	
Lab	Name		
Adc	dress		
Pho	one Number ()		
PAF	RT III ANALYTICAL R	RESULTS	

Facility GMS #:	_ Sampling Date/Time:
Test Site ID #:	Report Period:(year/quarter)
Well Name:	Well Purged (Y/N):
Classification of Ground Water:	Well Type: () Background () Intermediate
Ground Water Elevation (NGVD):	() Compliance
or (MSL):	() Other

Storet Code	Parameter Monitored	Sampling Method	Field Filtered Y/N	Analysis Method	Analysis Date/Time	* Analysis Results/Units	Detection Limits/Units

* Attach Laboratory Reports

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Pelz, Susan

From:	Putman, Charles "Pete" [CPPutman@pbsj.com]			
Sent:	Tuesday, June 28, 2005 10:28 AM			
То:	Pelz, Susan			
Cc:	Frank Coggins (fcoggins @scgov.net); 'Lois Rose'; Paul Wingler (pwingler@scgov.net)			
Subject:	Sarasota County Solid Waste Projects			
Follow Up Flag: Follow up				
Flag Status:	Flagged			

Central County Solid Waste Disposal Complex - Citizens Convenience Center

We submitted on May 27,2005 a revised site plan with canopies over all of the roll-off and electronics storage areas and an operations plan for the facilities.

Do you need any additional information for this proposed project?

Jackson Road Household Chemical Collection Facility

Sarasota plans to construct a household chemical collection facility at the Jackson Road recyclables transfer station. The facility will be similar to the unit proposed for the CCSWDC site, with the addition of an office, restroom, and covered drive through.

The facility will be adjacent to the transfer station and will not be in an area of the closed landfill.

We do not believe that an FDEP permit will be required for the household chemical collection facility. Please confirm.

Please don't hesitate to call should you need any additional information.

Pete Putman PBS&J

941-954-4036 941-350-0389 (cell)

Ross, Lora

From: Sent: To: Subject:

Thanks.

Ross, Lora Monday, June 27, 2005 3:05 PM Pelz, Susan; Morris, John R. Ŋ FW: Lora:





²umped out ditch in Ditch block -west











Dtich block-east

the berms out. Please see the following email and pictures for further information.

Culvert-west end

Susan and John,

Stadischt ier frat 1 permit

middle bet... end of ditch... end of ditch ... end of ditch ... pumped out di... Don Shaulis called this afternoon regarding the ditch blocks at Sarasota Central. He indicated that they finished pumping the water on Saturday (please see pics), and wanted to know if they could take the ditch blocks down. I asked him if there was any exposed waste, and he said that the cover was fine. Therefore, I told him that it was OK to take

Lora Ross Environmental Specialist I Solid Waste Section 3804 Coconut Palm Dr Tampa, FL 33619 813-744-6100 ext 375

----Original Message-----From: Don Shaulis [mailto:DSHAULIS@scgov.net] Sent: Monday, June 27, 2005 2:59 PM To: Ross, Lora Cc: Franklin Coggins; Gary Bennett; Mack Rhoades Subject: Lora:

Lora:

We will remove the ditch blocks on the north storm water conveyence in the morning of 6/28, as per our conversation on 6/27. Attached are the pictures that we took on 6/25/05. We will also forward to you the analytical data as soon as it arrives. Thank you for your attention in this matter.

Don Shaulis

Ross, Lora

From: Sent: To: Cc: Subject: Don Shaulis [DSHAULIS@scgov.net] Monday, June 27, 2005 2:59 PM Ross, Lora Franklin Coggins; Gary Bennett; Mack Rhoades Lora:











²umped out ditch in Ditch block -west middle bet... end of ditch...

t Ditch block-east end of ditch ...

east Dtich block-east on ... end of ditch ...

Culvert-west end pumped out di...

Lora:

We will remove the ditch blocks on the north storm water conveyence in the morning of 6/28, as per our conversation on 6/27. Attached are the pictures that we took on 6/25/05. We will also forward to you the analytical data as soon as it arrives. Thank you for your attention in this matter.

Don Shaulis











May 27, 2005

Ms. Susan Pelz, P.E. FDEP Southwest District 2804 Coconut Palm Drive Tampa, FL 33619

Re: Central County Solid Waste Disposal Complex – Sarasota County Citizens Convenience Center

Dear Ms. Pelz:

Attached is an operations plan and a revised site plan for the proposed citizens convenience center at Sarasota County's CCSWDC facility. We have added permanent canopies over the three roll off containers and the electronics storage area. All storage areas will be covered to prevent the accumulation of water.

Please don't hesitate to call if you have any questions or need any additional information.

Very truly yours,

C.P. (Pete) Putman, P.E. Vice President

c: Frank Coggins (w/attach.)

M:\Environmental\Sarasota County Solid Waste\120544 Sara Co SW 2005\120544.03 Citizens Convenience Ctr\l Pelz 5-27-

05.doc 2803 Fruitville Road, Suite 130, Sarasota, Florida 34237 • Telephone: 941.954.4036 • Fax: 941.951.1477 • www.pbsj.com

Sheet 4 of Plans inserted into

CITIZENS CONVENIENCE CENTER

Description

The proposed Citizens Convenience Center will include:

- Spaces for three 20-yard roll off containers for MSW and used tires
- A drop off for electronics
- A household chemical collection center

The roll off containers and the electronics storage area will be concrete pads covered with permanent canopies to prevent accumulation of water in the containers during inclement weather. The household chemical collection center will be a three-sided metal building with fencing on the fourth side. Household chemicals will be stored in a pre-manufactured hazardous waste storage unit.

The existing waste oil collection center will remain in operation.

Following are a site plan and cross sections for the facility.

Operations

The Citizens Convenience Center will have a full time attendant and will be in operation from 8:00 am to 5:00 pm six days per week.

The attendant will meet customers at the entrance and direct them to the appropriate area of the facility and will monitor the waste for unacceptable materials.

The roll off containers will be emptied daily.





April 19, 2005

Ms. Susan Pelz, P.E. FDEP Southwest District 2804 Coconut Palm Drive Tampa, FL 33619

Re: Central County Solid Waste Disposal Complex – Sarasota County Citizens Convenience Center

Dear Ms. Pelz:

Attached is a revised site plan for the proposed citizens convenience center at Sarasota County's CCSWDC facility. As requested we have added cross sections of the site and the household chemical collection facility.

Please don't hesitate to call if you have any questions or need any additional information.

Very truly yours,

C.P. (Pete) Putman, P.E. Vice President

c: Frank Coggins (w/attach.)

M:\Environmental\Sarasota County Solid Waste\120544 Sara Co SW 2005\120544.03 Citizens Convenience Ctr\l Pelz 4-19-05.doc 2803 Fruitville Road, Suite 130, Sarasota, Florida 34237 • Telephone: 941.954.4036 • Fax: 941.951.1477 • www.pbsj.com

(1 Bound set Drue)

Pelz, Susan

From: Sent: To: Subject: Franklin Coggins [fcoggins@scgov.net] Thursday, March 24, 2005 8:44 AM Pelz, Susan RE: Sarasota Central DRAFT permit



Response to raft permit for o Thanks Susan, I think I got it this time.

Frank Coggins Manager, Solid Waste Operations

>>> "Pelz, Susan" <Susan.Pelz@dep.state.fl.us> 3/23/2005 7:58:25 PM >>>
Frank,

There was no attachment... please re-send.

Thanks, Susan J. Pelz, P.E. Solid Waste Program Manager Southwest District 813-744-6100 x 386 susan.pelz@dep.state.fl.us

----Original Message----From: Franklin Coggins [mailto:fcoggins@scgov.net] Sent: Wednesday, March 23, 2005 12:07 PM To: Pelz, Susan Cc: Gary Bennett; Paul Wingler Subject: Re: Sarasota Central DRAFT permit

Attached find Sarasota County Comments and proposed change to Ops plan.

I sent a copy of the tank inspection to you.

If you have any questions please call or email 94-650-4160

Frank Coggins Manager, Solid Waste Operations

>>> "Pelz, Susan" <Susan.Pelz@dep.state.fl.us> 1/31/2005 6:27:31 PM >>>
Frank/Paul,

Please find attached your DRAFT permit for operation of the landfill. As I was drafting the permit I discovered that we do not have (or I could not find) a complete full-size set of drawings and only the cover page of the reduced size set (received April 1, 2004 with revised pages received June 7, 2004) is sealed. We need a full-size set of drawings with each page signed and sealed. RED text is where the full-size set of plans will be referenced when we get them. Blue text is just for ease of reference.

Please take a look at the conditions & let me know (email is best) if you have any comments. If there are no substantive concerns, I will route it around for signature as soon as I hear from you.

I appreciate your patience in this.

3/25/05 845m discussed w/Faml-- they will send Receised of Plan pages As weeded

If you have any questions, please call or email (email is better).

Susan J. Pelz, P.E. Solid Waste Program Manager Southwest District 813-744-6100 x 386 susan.pelz@dep.state.fl.us

<<130542-2.SO.doc>>

Response to Draft permit for operation of the landfill.

Specific Conditions: Part C – Operation Requirements

Comment/Question

SPECIFIC CONDITIONS: PART C - Operation Requirements

1. e.

1. Facility Operation Requirements.

e. **Daily,** the owner or operator shall operate the facility, maintain grades, or utilize berms and swales, to prevent ponded water within the disposal areas.

Ponded Water.

During periods of heavey rain, large vehicles will tend to track ruts within the operating area. Water from these heavy downpours can collect in these ruts. The ruts are bladed out during the day and cleared up by the end of the operating day. Will this type collection of water be considered ponding?

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.1., cont'd)

l. <u>Special Wastes.</u>

3) The asbestos shall be covered by a minimum of six (6) inches of soil prior to additional loads of waste being disposed in the same location.

<u>Asbestos.</u> Standard procedure is to dig a hole in the waste in the working face by moving garbage aside to provide a cavity to place the waste. The asbestos is placed in this hole. Waste is immediately placed back over the bags of deposited asbestos so as not to rupture the bags. The waste acts as a buffer to maintain the integrity of the bags during compaction so as not to create an airborne hazard for workers.

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.1.1., cont'd)
5) <u>White Goods and lawn mowers.</u> A maximum of 625
 (total) white goods and lawn mowers may be stored at
 the site at any time.

Sarasota County receives a significant number of white goods and lawn mowers per day. The number can exceed 625 in less than 2 weeks time. The stowage area has sufficient capacity to

stock more than 1500. We propose 1250 as a more reasonable number based on the numbers of white goods and lawn mowers generated each month.

7) <u>Yard Waste.</u> Bagged yard trash or land clearing debris shall not be mulched at the site unless the bags are removed prior to mulching. ...

All efforts are made to ensure that plastic bags are removed before mulching, however a deminimus amount may remain. Please clarify.

8) <u>Tires.</u> The tires shall be stored in a container, and in a manner which prevents nuisance conditions and vectors (i.e. mosquitoes, rats, etc.)

Please clarify that the tires to be stored are those from the working face prior to transporting to the tire collection site.

9) <u>Electronics.</u> A maximum of 200 electronic devices may be stored at the site at any time.

Receipt records shoe that the Site could receive as many as 200 electronic devices per day for recycling. Devices are removed every several days. Because of this large volume, the maximum number of electronic devices should be 1000. We are designing a Citizen Convenience Center that will incorporate an electronic devices collection storage area that will be able to easily contain the amount to electronic brought to the facility for recycling.

8. Waste Handling Requirements. All solid waste disposed of in the Class I landfill shall be covered as required by Rule 62-701.500(7), F.A.C.

a. <u>Initial Cover</u>. Initial cover shall be applied and maintained at the end of each working day in the Class I landfill in accordance with Rule 62-701.500(7)(e), F.A.C., so as to protect the public health and welfare.

1) All solid waste disposed of in the Class I landfill must be covered with at least 6 inches of compacted earth or other suitable material as approved by the Department (in writing), at the end of each working day. Working areas which have received initial cover and exhibit erosion which results in exposed waste shall be repaired by the end of the next working day.

2) Materials which have been previously used for intermediate or initial cover shall not be re-used for intermediate cover. These materials may be re-used as initial cover provided the runoff from these areas is managed as leachate. The re-use of initial cover soil as intermediate cover is understood, however soil that was applied as intermediate soil and did not come in contact with waste is not considered contaminated and should be allowed to be used as intermediate soil again and water run off deemed stormwater rather than leachate. If intermediate soil that has not come in contact with waste and has been separated from the waste by 6 inches of initial cover cannot be used as intermediate cover in a second application, a significant amount of soil will be buried in the landfill and require large quantities of additional cover material. This soil would also unnecessarily be buried in the landfill. We ask that the following language or similar language be used:

Materials which have been previously used for intermediate and was separated from the waste by 6 inches of initial cover and did not come in contact with the waste may be used for intermediate cover. Runoff from these areas may be treated as stormwater.

SPECIFIC CONDITIONS: PART C - Operation Requirements

11. Leachate Management.

a. Leachate shall be managed in accordance with the requirements of Rule 62-701.500(8), F.A.C., the **Operation Plan** [ref. SC#A.2.a(1)], and other applicable Department rules.

b. Leachate and potentially contaminated stormwater which has accumulated in low areas within the disposal area shall be removed **daily** for disposal, and <u>shall not be</u> recirculated into the landfill as described in the *Operation Plan* [ref. SC#A.2.a(1), see §L.2.h.3. and Attachment L-3, Figures L-6 and L-7]. In the event that permittee elects to recirculate leachate into the landfill, a minor modification shall be requested pursuant to Specific Condition #A.3.

The description in the Operation Plan [ref. SC#A.2.a(1), see §L.2.h.3. and Attachment L-3, Figures L-6 and L-7] was made a part of the operations plan at the request of the department. Figures L-6 and L7 were drawings specifically made from depictions provided by the department. Information provided to us by the department were that this method was used at other landfills with success. We agree that this should not be a method for managing leachate contaminated storm water and will not use this method.

Requested Change Section L Operations Plan Sarasota County, Florida

Change Section L.2.c Controlling the Type of Waste Received at the Site

......The maximum on-site storage for special wastes will be as follows:

- 1000 Electronic devices on e-waste slab.
- 30 batteries in a secondary containment covered tray.
- 950 gallons of usd oil in double containment (near entrance).
- 20 gallons of used oil placed upright in undamaged container (at the maintenance building).
- 1250 white goods, and lawnmowers, will be placed uprightuntil all liquids, CFC's and freon are removed.

Shupsoth Cart permit

March 15, 2005

p.a. wingler, p.e.

Professional Engineer

Susan Pelz, P.E. Department of Environmental Protection Solid Waste Section - S W District 3804 Coconut Palm Drive Tampa, Florida 33619

Re: Central County Solid Waste Disposal Complex Sarasota, Florida Concrete Tank Evaluation

Dear Ms. Pelz:

The subject leachate was inspected March 7, 2005. An inspection was conducted on the walls and portions of the floors to assess the condition of the tank.

<u>History</u>

The Crom Corporation built the 1.8 MG tank in 1997 (Crom's Job Number 9736). The reservoir is a complete tank within a tank. The outer tank or secondary containment vessel is 130"-0" diameter with a 21' high 6" wall. The inner tank, which sits on a stone subgrade within the outer tank, is 100'-0" diameter with a 30' high 8" wall. The inner and outer tank floors are cast concrete 5" and 4" thick, respectively. The walls of both tanks are shotcrete which contains a steel shell diaphragm.

Inspection

The exterior wall surface of the outer tank has a few minor shrinkage cracks. These cracks are cosmetic in nature and do not affect the tank's integrity. The interior wall was sounded and no hollows or delaminations were detected. The floor does not exhibit characteristics associated with settlement of the subgrade.

The inner and outer surface of the inner tank wall do not exhibit any cracks and the protective coatings are intact.

Susan Pelz Page 2

March 15, 2005

Recommendations

An in depth evaluation of the tank protective coatings should be conducted at the next inspection in order to determine their integrity. Coatings have a finite life and at some point they should be replaced to offset the aggressive leachate.

If you have any questions, please feel free to give me a call at (941) 861-1578.

Sincerely,

Paul A. Wingler, P.E. Project Manager

cc.

Frank Coggins, Manager, Solid Waste C Don Shaulis, Operations Supervisor Chip Harden, Onyx Waste



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

FEB 17 2005

SOUTHWEST DISTRICT

Ms. Susan Pelz, P.E. FDEP Southwest District 2804 Coconut Palm Drive Tampa, FL 33619

Re: Central County Solid Waste Disposal Complex – Sarasota County Citizens Convenience Center

Dear Ms. Pelz:

Attached is a site plan for a proposed citizens convenience center at Sarasota County's CCSWDC facility. The convenience center will have the following functions:

Household Chemical Collection

- Household chemicals collected will be stored in a prefabricated hazardous material storage unit.
- The chemical collection structure will be a metal building with three walls and fencing on the fourth side.
- Drum storage will be in a sealed concrete curb containment area.

MSW

- Three roll off containers will be provided for collection of MSW
- One roll off container may be used for collection of used tires
- The containers will be emptied daily so that no liquid accumulates
- The containers will be covered with tarps or other cover material during inclement weather or will be removed from the collection area and emptied

Electronics

- A concrete slab will be provided for collection of electronics
- The devices will be placed on pallets for loading convenience

Very truly yours,

C.P. (Pete) Putman, P.E. Vice President

c: Frank Coggins (w/attach.)

941-954-4036 X222

CONSTRUCTION I

CENTRAL COUI CITIZEN'S CONVE

SECTION: 20/29/30, TOWN

CLIENT:

SARASOTA COUNTY ENVIRONMENTAL SERVICES SOLID WASTE OPERATIONS

4000 KNIGHTS TRAIL ROAD NOKOMIS, FLORIDA 34275





"INVESTIGATE BEFOR



CALL SUNSHINE @ 1-FL. STATUE 553.851 MIN. OF 2 DAYS AND DAYS NOTICE BEFORE

THESE PLANS HAVE BEEN PREPARED DEPARTHENT OF TRANSPORTATION, RI STANDARDS (DATED JAN. 2000), TH TRANSPORTATION, STANDARD SPECIF BRIDGE CONSTRUCTION (DATED 2000)



PROJECT LOCATION MAP



GENERAL NOTES

1. ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE METHODS, STANDARDS AND SPECIFICATIONS OF SARASOTA COUNTY AND ALL APPLICABLE AGENCIES.

2. ALL CONSTRUCTION MUST CONFORM TO THE MINIMUM STANDARDS SET FORTH IN SARASOTA COUNTY'S LAND DEVELOPMENT CODE AND/OR ZONING REGULATIONS.

3. TO THE BEST OF THE ENGINEER'S KNOWLEDGE THE PLANS AND SPECIFICATIONS COMPLY WITH THE MINIMUM BUILDING CODES AND FIRE CODES.

4. CONTRACTOR TO OBTAIN APPROPRIATE WORK PERMITS PRIOR TO BEGINNING CONSTRUCTION.

5. CONTRACTOR TO NOTIFY ALL UTILITIES FORTY-EIGHT (48) HOURS PRIOR TO DEMOLITON AND/OR EXCAVATION, INCLUDING THE LOCAL GAS COMPANY IN ACCORDANCE WITH F.S. 553.851. CALL "SUNSHINE STATE ONE CALL SYSTEM" 1-800-432-4770 SO THAT UNDERGROUND UTILITIES MAY BE FIELD LOCATED.

 ALL UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO VERIFY AND COORDINATE WITH THE COUNTY, T.E.C.O., VERIZON, PEOPLES GAS, ETC. FOR THE REMOVAL OR RELOCATION OF ANY OF THESE FACILITIES.

7. CONTRACTOR TO COORDINATE WITH OWNER'S REPRESENTATIVE ALL EXISTING UTILITIES AND APPURTENANCES TO BE REMOVED, I.E. LIGHT POLES, TREES, SHRUBS, ETC. BEFORE WORK BEGINS.

8. ANY WORK SHALL COMPLY WITH THE AMERICANS WITH DISABILITIES ACT AND THE FLORIDA ACCESSIBILITY CODE. (ARTICLE I, SECTION 74-4(3), PAGE 4)

9. ELEVATIONS ARE BASED ON NGVD (NATIONAL GEODETIC VERTICAL DATUM) OF 1929.

10. CONTRACTOR TO VERIFY ALL PLAN DIMENSIONS AND SITE CONDITIONS, NOTIFY COMPANY REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN SITE CONDITIONS AND INFORMATION SHOWN ON DRAWINGS PRIOR TO COMMENCING WORK.

11. CONTRACTOR TO MAKE FIELD ADJUSTMENT, AS NECESSARY, WITH THE APPROVAL OF THE OWNER, ENGINEER AND CITY WHEN REQUIRED.

12. ALL CONCRETE TO HAVE A MINIMUM STRENGTH OF 3000 PSI WITHIN 28 DAYS.

13. ANY WELLS DISCOVERED DURING EXCAVATION, EARTHMOVING, OR CONSTRUCTION MUST BE REPORTED TO SARASOTA COUNTY HEALTH DEPARTMENT ENVIRONMENTAL HEALTH WITHIN 24 HOURS OF DISCOVERY.

14. ANY WELLS ON SITE THAT WILL HAVE NO USE SHALL BE PLUGGED BY A LICENSED WELL DRILLING CONTRACTOR IN AN APPROVED MANNER.

PAVING, GRADING & DRAINAGE NOTI

1. ALL SOIL EXCAVATION, BACKFILL AND USAGE TO BE DONE UNDER THE RECOMMENDATIONS OF A CERTIFIED SOIL TESTING LABORATORY.

2. THE CONTRACTOR SHALL PROVIDE ALL BRACING, SHEETING OR SHORING NECESSARY TO CONSTRUCT AND PROTECT ANY EXCAVATION AGAINST COLLAPSING. WET UNSUITABLE MATERIAL WILL BE REPLACED WITH COMPACTED SELECT BACKFILL MATERIAL.

3. ALL UNDERGROUND UTILITIES INCLUDING CONDUIT FOR UTILITY AND IRRIGATION CROSSINGS SHALL BE INSTALLED PRIOR TO PAVEMENT CONSTRUCTION. WHERE SLEEVES ARE PROVIDED, THE CONTRACTOR SHALL DESIGNATE THEIR ACCURATE LOCATION ON THE PLANS.

4. ALL DISTURBED AREAS TO BE RESTORED TO ORIGINAL STATE OR BETTER.

5. CONTRACTOR TO CLEAR, GRUB AND REMOVE ALL DEBRIS ON SITE AS NECESSARY TO COMPLETE WORK.

6. DISPOSE OF ALL UNSUITABLE MATERIALS OFF-SITE. EQUIPMENT TO BE DISPOSED OF OR MOVED IN ACCORDANCE WITH INSTRUCTIONS OF OWNER'S REPRESENTATIVE.

7. ALL MATERIAL EXCAVATED THAT IS SUITABLE FOR FILL UNDER PAVING, IS TO BE SPREAD AND COMPACTED IN LOCATIONS DESIGNATED BY THE OWNER'S REPRESENTATIVE.

8. WHEN ALL EXCAVATION AND DEMOLITION IS COMPLETE, CLEAN FILL SHALL BE SPREAD AND COMPACTED IN LIFTS DESIGNATED BY THE TESTING LABORATORY TO THE REQUIRED ELEVATION AS SHOWN ON PLANS.

9. GRADES NOT TO EXCEED 4:1 RATIO WITHOUT NOTIFICATION AND APPROVAL OF OWNER AND ENGINEER.

10. ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND/OR FDOT STANDARD INDEX NO. 17645 AND NO. 17355.

11. ALL PAVEMENT MARKINGS, EXCEPTING PARKING STALLS, SHALL BE "ALKYD THERMOPLASTIC 90 MILS IN THICKNESS". (DITM, SECTION B.1.H, PAGE 98)

12. THE BACK OF ALL CURBS, PAVEMENT EDGES, AND DETENTION AREAS SHALL BE SODDED. (DITM, SECTION B.1.G, PAGE 98)(DITM, SECTION C.2, PAGE 101)

FORTUITOUS FINDS STATEMENT

THE FOLLOWING REQUIREMENTS APPLY TO ALL BUILDING CONSTRUCTION OR ALTERATION, OR LAND ALTERATION ACTIVITIES IN ACCORDANCE WITH SARASOTA COUNTY ORDINANCE # 2004-073 AND WITH THE HISTORIC PRESERVATION CHAPTER OF APOXSEE: THE REVISED AND UPDATED SARASOTA COUNTY COMPREHENSIVE PLAN:

1. IF EVIDENCE OF THE EXISTENCE OF HISTORIC RESOURCES IS DISCOVERED OR OBSERVED AT DEVELOPMENT SITES OR DURING DEVELOPMENT ACTIVITIES AFTER FINAL APPROVAL, ALL WORK SHALL CEASE IN THE AREA OF EFFECT AS DETERMINED BY THE DIRECTOR. THE DEVELOPER, OWNER, CONTRACTOR, OR AGENT THEREOF SHALL NOTIFY THE DIRECTOR OF HISTORICAL RESOURCES WITHIN TWO WORKING DAYS. EXAMPLES OF SUCH EVIDENCE INCLUDE WHOLE OR FRAGMENTARY STONE TOOLS, SHELL TOOLS, ABORIGINAL OR HISTORIC POTTERY, HISTORIC GLASS, HISTORIC BOTTLES, BONE TOOLS, HISTORIC BUILDING FOUNDATIONS, SHELL MOUNDS, SHELL MIDDENS, OR SAND MOUNDS. THE DIRECTOR SHALL ASSESS THE SIGNIFICANCE OF THE FINDS WITHIN THREE WORKING DAYS OF NOTIFICATION AND TO MITIGATE ANY ADVERSE EFFECTS SO AS TO MINIMIZE DELAYS TO DEVELOPMENT ACTIVITIES.

2. IF ANY HUMAN SKELETAL REMAINS OR ASSOCIATED BURIAL ARTIFACTS ARE DISCOVERED AT DEVELOPMENT SITES OR DURING DEVELOPMENT ACTIVITY, ALL WORK IN THE AREA MUST CEASE, AND THE PERMITTEE MUST IMMEDIATELY NOTIFY THE NEAREST LAW ENFORCEMENT OFFICE AND NOTIFY THE DIRECTOR OF HISTORICAL RESOURCES WITHIN TWO WORKING DAYS. ACCORDING TO CHAPTER 872, FLORIDA STATUTES, IT IS UNLAWFUL TO DISTURB, VANDALIZE, OR DAMAGE A HUMAN BURIAL.



PRINCIPAL ADDRESS: 2001 NW 107th AVENUE MIAMI, FL. 33172-2507 FBRP CERT. OF AUTH. No. 24 CLIENT:

SARASOTA COUNTY

ENVIRONMENTAL SERVICES

SOLID WASTE OPERATIONS

4000 KNIGHTS TRAIL ROAD

NOKOMIS, FLORIDA 34275

PRODUCTION ADDRESS: 2803 FRUITVILLE RD. SUITE 130 SARASOTA, FLORIDA 34237 Ph. (941) 954–4036 RASO PROJECT:

1921

QUN

CENTRAL COUNT CITIZEN'S DROP C

BEST MANAGMENT PLAN NOTES

1. PROTECTION OF EXISTING STORM SEWER SYSTEMS: DURING CONSTRUCTION, ALL STORM SEWER INLETS IN THE VICINITY OF THE PROJECT SHALL BE PROTECTED BY SEDIMENT TRAPS SUCH AS SECURED HAY BALLES, SOD, STONE, ETC., WHICH SHALL BE MAINTAINED AND MODIFIED AS REQUIRED BY THE CONSTRUCTION PROCESS (SEE F.D.O.T. INDEX NO. 102).

2. SEDIMENT TRAPPING MEASURES: SEDIMENT BASINS AND TRAP, PERIMETER BERMS, FILTER FENCES, BERMS SEDIMENT BARRIERS, VEGETATIVE BUFFERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT AND/OR PREVENT THE TRANSPORT OF SEDIMENT ONTO ADJACENT PROPERTIES, OR INTO EXISTING WATER BODIES, MUST BE INSTALLED, CONSTRUCTED OR IN THE CASE OF VEGETATIVE BUFFERS, PROTECTED FROM DISTURBANCE, AS A FIRST STEP IN THE LAND ALTERATION PROCESS. SEE SHEET NO. 12.

3. MAINTENANCE: ALL EROSION AND SILTATION CONTROL DEVICES SHALL BE CHECKED REGULARLY, ESPECIALLY AFTER EACH RAINFALL, AND WILL BE CLEANED OUT AND/OR REPAIRED AS REQUIRED.

4. ALL PRACTICABLE AND NECESSARY EFFORT SHALL BE TAKEN DURING CONSTRUCTION TO CONTROL AND PREVENT EROSION AND TRANSPORT OF SEDIMENT MATERIAL TO WETLANDS AND CHANNEL AREAS.

5. ALL EROSION CONTROL BARRIERS SHALL BE REMOVED FOLLOWING SOIL STABILIZATION.

6. EROSION/SEDIMENT CONTROL BMP IN ADDITION TO THOSE PRESENTED ON THE PLANS SHALL BE IMPLEMENTED AS NECESSARY TO PREVENT TURBID DISCHARGES FROM FLOWING ONTO ADJACENT PROPERTY OR ROADWAYS. CONTROLS SHALL BE DESIGNED, INSTALLED, AND MAINTAINED AS REQUIRED BY BE DESIGNED, INSTALLED, AND MAINTAINED AS REQUIRED BY THE ENGINEER/CONTRACTOR TO ENSURE SURFACE WATER QUALITY CONDITIONS ARE IN COMPLIANCE WITH THE STATE WATER QUALITY STANDARDS, AND CHAPTER 54, ARTICLE VII OF THE SARASOTA COUNTY CODE OF ORDINANCES TITLED WATER POLLUTION CONTROL.

7. THE CONTRACTOR/ENGINEER SHALL REPORT ALL OFFSITE SURFACE WATER DISCHARGES WITH TURBIDITY IN EXCESS OF 29 SURFACE WATER DISCHARGES WITH TURBIDITY IN EXCESS OF 29 NTUS (NEPHELMETRIC TURBIDITY UNITS) ABOVE BACKGROUND LEVEL TO WATER RESOURCES WITHIN 24 HOURS AFTER OCCURRENCE (941-861-6220 OR FAX 941-861-6270). NOTIFICATION SHALL INCLUDE CAUSE OF THE PROBLEM, CORRECTIVE ACTIONS TAKEN, AND INSTALLATION OF ADDITIONAL EROSION/SEDIMENT CONTROLS NOT SHOWN ON THE APPROVED CONSTRUCTION PLAN DRAWINGS.

8. THE CONTRACTOR/ENGINEER SHALL ENSURE THAT ADJACENT PROPERTIES ARE NOT IMPACTED BY WIND EROSION OR EMISSIONS OF UNCONFINED PARTICULATE MATTER IN ACCORDANCE WITH RULE 62-296.320(4)(C) 1.,FLORIDA ADMINISTRATIVE CODE, FROM THE CONSTRUCTION SITE BY TAKING ADEQUATE MEASURES TO STABILIZE AFFECTED AREAS.

9. FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ENTER STORM WATER DRAINAGES OR WATER BODIES, OR FUEL AND OTHER PETROLEUM PRODUCT SPILLS THAT ARE IN EXCESS OF 25 GALLONS SHALL BE CONTINUED, CLEANED UP AND REPORTED IMMEDIATELY TO WATER RESOURCES (941-861-6220). SMALLER GROUND SURFACE SPILLS SHALL BE CLEANED UP AS SOON AS PRACTICAL.

THIS FACILITY MAY BE REQUIRED TO OBTAIN A FLORIDA 10. THIS FACILITY MAY BE REQUIRED TO OBTAIN A FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM MULTI-SECTOR GENERIC PERMIT FOR STORWWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY AND DEVELOP A STORWWATER POLLUTION PREVENTION PLAN. CONTACT THE NPDES STORWWATER NOTICES CENTER AT (866-921-9904). THE EMAIL ADDRESS FOR THE NPDES STORWWATER SECTION IS MALLIC:NPDES_STORWWATER GDEP.STATE.FLUS. INFORMATION MAY ALSO BE OBTAINED ONLINE AT WWW DEP STATE (1) (WATEP (STORWWATER ADDRESS 10.

WWW.DEP.STATE.FL.US/WATER/STORMWATER/NPDES

11. ANY CONTAMINATED SOILS OR GROUNDWATER IMPACTED DURING CONSTRUCTION ACTIVITIES MUST BE HANDLED IN ACCORDANCE WITH ALL APPLICABLE STATUTES, RULES, AND REGULATIONS.

12. ANY MONITORING WELLS DESTROYED DURING CONSTRUCTION ACTIVITIES MUST BE REPLACED.

LEGAL DESCRIPTION

0341-00-1000

COUNTY LANDFILL ALL 10-38-19.

PERMIT NOTES

SARASOTA COUNTY OWNS THE SUBJECT PROPERTY (CENTRAL COUNTY LANDFILL) AND HAS UNIFIED CONTROL OF THE ENTIRE SUBJECT PROPERTY

THIS PROJECT IS BEING FUNDED AND OPERATED BY SARASOTA COUNTY'S PARKS AND RECREATION DEPARTMENT. INTENDED TO BE USED AS A PUBLIC PARK AND NATURE WALKING AND BIKE TRAIL FOR THE CITIZENS OF THE AREA.

SHWT= APPROXIMATELY 27'-28' OR 1'-2' BELOW GROUND SURFACE.

OPERATION AND MAINTENANCE WILL BE PERFOMED BY SARASOTA COUNTY STAFF.



- CAL VILLAGE / POP AS
Jobber P & Malak
St. Barrow Contractor
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		4 5	12	FL. P.E. #: 35217	SHEET	2




















3012 U.S. Highway 301 N Suite 700 Tampa, FL 33619-2242

SCS ENGINEERS

February 10, 2005 File No. 09201010.16

Susan Pelz, P.E. Florida Department of Environmental Protection Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619-2242



Subject: Sarasota County, CCSWDC Landfill Full-Sized Signed and Sealed Operations Drawings

Dear Ms. Pelz:

On behalf of Sarasota County, SCS Engineers (SCS) submits the enclosed full-sized set of the Operations Drawings for the referenced facility.

Please let us know if you need any additional information.

Very truly yours,

John A. Banks, P.E. Project Director

Rey Som

Raymond J. Dever, P.E., DEE Vice President SCS ENGINEERS

JAB/RJD:jab

Enclosure

cc: Frank Coggins, Sarasota County w/enclosure

Pelz, Susan

From: Paul Wingler [PWINGLER@scgov.net]

Sent: Wednesday, February 02, 2005 10:42 AM

To: Pelz, Susan; Dan McAllister; Don Shaulis; Franklin Coggins; Mack Rhoades; jbanks@scsengineers.com

Subject: RE: Sarasota Central DRAFT permit

S: / J: Up date. PBSJ is sending the 90% Cit. Conv. Cnt. plan to Susan with the intention of including the project with this permit. P

Pelz, Susan" <Susan.Pelz@dep.state.fl.us> 2/2/2005 10:20:05 AM >>> John,

I just spoke with Paul Wingler & he indicated that we would have comments (email) by 2/14/05.

Thanks, Susan J. Pelz, P.E. Solid Waste Program Manager Southwest District 813-744-6100 x 386 susan.pelz@dep.state.fl.us

-----Original Message-----From: John A. Banks [mailto:jbanks@scsengineers.com] Sent: Wednesday, February 02, 2005 9:45 AM To: Pelz, Susan Subject: RE: Sarasota Central DRAFT permit

Thanks Susan. When are you looking to get comments back from the County?

John A. Banks, P.E. Project Director SCS Engineers Tampa, Florida (813) 621-0080 jbanks@scsengineers.com

-----Original Message-----From: Pelz, Susan [<u>mailto:Susan.Pelz@dep.state.fl.us</u>] Sent: Tuesday, February 01, 2005 3:41 PM To: John A. Banks Cc: fcoggins@scgov.net; pwingler@co.sarasota.fl.us; Morris, John R. Subject: RE: Sarasota Central DRAFT permit

John,

I just need 1 full size set with each page signed & sealed. I have enough reduced size sets.

thanks, Susan J. Pelz, P.E. Solid Waste Program Manager #

Southwest District 813-744-6100 x 386 susan.pelz@dep.state.fl.us

-----Original Message-----From: John A. Banks [mailto:jbanks@scsengineers.com] Sent: Tuesday, February 01, 2005 2:06 PM To: Pelz, Susan Cc: fcoggins@scgov.net; pwingler@co.sarasota.fl.us Subject: RE: Sarasota Central DRAFT permit

Susan, How many sets of full sized plans would you like? Also do you need any more of the half size sets?

John A. Banks, P.E. Project Director SCS Engineers Tampa, Florida (813) 621-0080 jbanks@scsengineers.com

-----Original Message-----From: Pelz, Susan [mailto:Susan.Pelz@dep.state.fl.us] Sent: Monday, January 31, 2005 6:28 PM To: Frank Coggins (E-mail); Paul Wingler (E-mail) Cc: Morris, John R.; John A. Banks Subject: Sarasota Central DRAFT permit

Frank/Paul,

Please find attached your DRAFT permit for operation of the landfill. As I was drafting the permit I discovered that we do not have (or I could not

find) a complete full-size set of drawings and only the cover page of the reduced size set (received April 1, 2004 with revised pages received June 7,

2004) is sealed. We need a full-size set of drawings with each page signed and sealed. RED text is where the full-size set of plans will be referenced when we get them. Blue text is just for ease of reference.

Please take a look at the conditions & let me know (email is best) if you have any comments. If there are no substantive concerns, I will route it around for signature as soon as I hear from you.

I appreciate your patience in this.

If you have any questions, please call or email (email is better).

Susan J. Pelz, P.E. Solid Waste Program Manager Southwest District 813-744-6100 x 386 susan.pelz@dep.state.fl.us

<<130542-2.SO.doc>>

Pelz, Susan

From:Pelz, SusanSent:Tuesday, February 01, 2005 3:41 PMTo:'John A. Banks'Cc:fcoggins@scgov.net; pwingler@co.sarasota.fl.us; Morris, John R.Subject:RE: Sarasota Central DRAFT permit

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Susan J. Pelz, P.E. Solid Waste Program Manager Southwest District 813-744-6100 x 386 susan.pelz@dep.state.fl.us

<<130542-2.SO.doc>>

Tracking:

Recipient

Read

'John A. Banks' fcoggins@scgov.net pwingler@co.sarasota.fl.us Morris, John R.

Read: 2/1/2005 5:37 PM

Pelz, Susan

From: Sent: To: Cc: Subject:

٢.

Pelz, Susan Monday, January 31, 2005 6:28 PM Frank Coggins (E-mail); Paul Wingler (E-mail) Morris, John R.; John Banks (E-mail) Sarasota Central DRAFT permit

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Susan J. Pelz, P.E. Solid Waste Program Manager Southwest District 813-744-6100 x 386 susan.pelz@dep.state.fl.us



130542-2.SO.d oc

Tracking:

Recipient Frank Coggins (E-mail) Paul Wingler (E-mail) Morris, John R. John Banks (E-mail) Read

Read: 2/1/2005 7:32 AM

PERMITTEE

Sarasota County Solid Waste Operations Mr. Gary Bennett, General Mgr 4000 Knights Trail Road Nokomis, Florida 34275

PERMIT/CERTIFICATION

WACS ID No: SWD/58/51614 Permit No: **130542-002-SO** Date of Issue: Expiration Date: County: Sarasota Lat/Long: 27°12'11"N 82°23'16"W Sec/Town/Rge:1-4, 9-16/38S/19E Project: Central County Solid Waste Disposal Complex (CCSWDC), Class I Landfill

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-330, 62-520, 62-522, 62-550, and 62-701. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

To operate, monitor and maintain a Class I landfill - Phase 1 (approximately 55 acres), and related facilities, referred to as the Central County Solid Waste Disposal Complex, subject to the specific and general conditions attached, for the management and disposal of solid waste, located at the north end of Knights Trail Road, 2 miles east of I-75, northeast of Venice, Sarasota County, Florida. The specific conditions attached are for the operation of a:

- 1. Class I Landfill
- 2. Leachate Storage Tank, and special waste management

General Information:	
Disposal acres	55 acres (5 disposal units - "Cells")
Lowest elevation	+24 feet NGVD (Cell 5 sump)
Bottom liner design	Composite, 60 mil HDPE on one foot of clav
LCS design (sideslope risers)	Geonet/geotextile, rock/8-inch HDPE LCS piping, 24" sand
LDS design	none
Leachate storage tank	Single concrete tank, 1.8 MG, concrete secondary
Final elevation (including	the first second plan, §L.2.n.2., Attachment L-/
cover)	+121 feet NGVD [ref. SC#A.2.b, Sheet 2]
Slopes	3H:1V sideslopes,
	4% top slope [ref. SC#A.2.b., Sheet 3]

This permit contains compliance items summarized in **Attachment 1** that shall be complied with and submitted to the Department by the dates noted. If the compliance dates are not met and submittals are not received by the Department on the dates noted, enforcement action may be initiated to assure compliance with the conditions of this permit.

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART A, Solid Waste Facility General Requirements

1. Landfill Designation. This site shall be classified as a Class I Landfill, and shall be operated in accordance with all applicable requirements of Chapters 62-4, 62-302, 62-330, 62-520, 62-522 and 62-701, Florida Administrative Code.

2. Permit Application Documentation. This permit is valid for operation of the Class I landfill and related appurtenances in accordance with in accordance with all applicable requirements of Department rules and the reports, plans and information submitted by SCS Engineers, Inc. [SCS] (unless otherwise noted), as follows:

a. Document entitled <u>Operation Permit Renewal Application -</u> <u>Central County Solid Waste Disposal Complex</u>, (3-ring bound document) dated February 28, 2002 (received March 1, 2002) as revised, replaced or amended (information inserted into original) June 28, 2002, July 26, 2002 (received July 29, 2002), September 20, 2002, May 2, 2003, May 28, 2003, April 1, 2004, June 4, 2004 (received June 7, 2004), and November 18, 2004, including, but not limited to:

- 1) Operations Plan (Section L);
- 2) Groundwater Monitoring Plan Addendum (Section M);

3) Stormwater berm sideslope stability information (Section
J).

b. Plan Sheets titled, <u>Sarasota County Central County Solid Waste</u> <u>Disposal Complex Operations Drawings,...</u> (11" x 17" Sheets 1 through 17, including 13A, B, C and D) dated March 2004 (received April 1, 2004) including revised sheets inserted into original received June 7, 2004;

c. <u>Geotechnical Evaluation, Hydrogeological Survey and</u> <u>Groundwater Monitoring Plan, Sarasota Central Landfill Complex,</u> <u>Sarasota County, Florida, (spiral bound document) dated March 10,</u> 1992 (received June 28, 2002) prepared by Ardaman & Associates, Inc.

d. Appendix A, <u>Groundwater Monitoring Plan Evaluation, Central</u> <u>County Solid Waste Disposal Complex,...</u> (3-ring bound document), dated June 28, 2002, including information (inserted into original) received July 29, 2002.

3. **Permit Modifications**.

a. Any construction or operation not previously approved as part of this permit shall require a separate Department permit unless the Department determines a permit modification to be more appropriate. Any significant changes to the operations at the facility shall require a permit modification. Permits shall be modified in accordance with the requirements of Rule 62-4.080, F.A.C. A modification which is reasonably expected to lead to substantially different environmental impacts which require a detailed review by the Department is considered a substantial modification.

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART A, Solid Waste Facility General Requirements

(Specific Condition #A.3., cont'd)

b. This permit authorizes the **operation** of the Phase I, Class I disposal facility, the leachate storage tank system and related appurtenances.

4. **Permit Renewal. No later than August 1, 2009,** the permittee shall apply for a renewal of a permit on forms and in a manner prescribed by the Department, in order to assure conformance with all applicable Department rules. Permits shall be renewed at least every five years as required by Rule 62-701.320(10), F.A.C. Operation permit renewal shall include, but not be limited to, an updated Operations Plan and Site Plans for sequence of filling with cross-sections of lifts.

5. **Professional Certification**. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.), Florida Statutes, applicable portions of permit applications and supporting documents which are submitted to the Department for public record shall be signed and sealed by the professional(s) who prepared or approved them.

6. **General Conditions.** The permittee shall be aware of and operate under the "General Conditions". General Conditions are binding upon the permittee and enforceable pursuant to Chapter 403, Florida Statutes.

7. **Permit Acceptance**. By acceptance of this Permit, the Permittee certifies that he/she has read and understands the obligations imposed by the Specific and General Conditions contained herein and also including date of permit expiration and renewal deadlines. It is a violation of this permit for failure to comply with all conditions and deadlines.

8. **Regulations.** Chapter 62-701, F.A.C., effective May 27, 2001, is incorporated into this permit by reference. In the event that the regulations governing this permitted operation are revised, the Department shall notify the permittee, and the permittee shall request modification of those specific conditions which are affected by the revision of regulations to incorporate those revisions.

9. **Prohibitions**.

a. The prohibitions of Rule 62-701.300, F.A.C., shall not be violated by the activities at this facility.

b. In the event that surface depressions which may be indicative of sinkhole activity, or subsurface instability, are discovered onsite, or within 500 feet of the site, the Department shall be notified in accordance with Specific Condition #C.7.b, below. Written notification shall be submitted within 7 days of discovery. The written notification shall include a description of the depression, the location and size of the depression shown on an appropriate plan sheet, and a corrective action plan which describes the actions necessary to prevent the unimpeded discharge of waste or leachate into ground or surface water.

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART A, Solid Waste Facility General Requirements

(Specific Condition #A.9., cont'd)

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c. <u>Waste Burning</u>. Open burning of solid waste is prohibited except in accordance with Rule 62-701.300(3) and Chapter 62-256, F.A.C. All fires which require longer than one (1) hour to extinguish must be promptly reported to the Department in accordance with Specific Condition #C.7.b., below.

ations PERMIT NO: 130542-002-SO Central County SW Disposal Complex 2

SPECIFIC CONDITIONS: PART B - Construction Requirements

1. **Certification of Construction Completion**. All information required by this Specific Condition shall be signed and sealed by a registered professional engineer or land surveyor as appropriate. At the completion of construction, information listed below shall be provided to the Department as part of the Certification of Construction Completion.

a. Within sixty (60) days after any specified construction has been completed or as otherwise specified in this permit, the following activities shall be completed:

1) The owner or operator shall submit a Certification of Construction Completion, Form 62-701.900(2), signed and sealed by the professional engineer responsible for the construction to the Department for approval, and shall arrange for Department representatives to inspect the construction in the company of the permittee, the engineer, and the facility operator.

2) The owner or operator shall submit Record Drawings/Documents showing all changes (i.e. all additions, deletions, revisions to the plans previously approved by the Department including site grades and elevations). The Record Documents shall include as-built plans details and elevations (survey) as appropriate.

3) The owner or operator shall submit a narrative indicating all changes in plans and the cause of the deviations, and certification by the design engineer to the Department.

4) The engineer of record shall provide a report to verify conformance with the project specifications. The report including all related testing results shall be submitted to the Department along with the completion of construction documents.

2. Construction.

a. All significant construction activities shall be approved by the Department prior to initiating work, unless specifically authorized otherwise.

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

1. Facility Operation Requirements.

a. The permittee shall operate this facility in accordance with Rule 62-701.500, F.A.C.; the information listed in Specific Condition #A.2., above; and any other applicable requirements.

b. Waste shall not be disposed (unloaded, spread, or compacted) during non-daylight hours, unless sufficient lighting is provided to adequately assess the materials and remove unacceptable wastes.

c. Leachate shall not be deposited, injected, dumped, spilled, leaked, or discharged in any manner to soils, surface water or groundwater outside the liner and leachate management systems at any time during the construction or operation of this facility.

d. The permittee shall clearly stake/mark the location of the edge of the liner and maintain the locations as the landfill increases in elevation to prevent waste disposal and leachate runoff outside the geomembrane liner. The markers shall be of a sufficient size or design that effectively prevents waste disposal in unauthorized areas. The staking/markers shall be maintained at all times throughout the operation of the facility. Waste shall not be disposed within ten feet of the edge of the liner.

e. Top gradients of intermediate cover shall be designed to prevent ponding or low spots and minimize erosion. **Daily**, the owner or operator shall operate the facility, maintain grades, or utilize berms and swales, to prevent ponded water within the disposal areas.

f. The Class I disposal area shall be operated to limit the leachate head to one foot above the liner.

g. <u>Unauthorized Wastes</u>. A sufficient number of spotters shall be utilized at the facility for removing unacceptable wastes. At a minimum, spotting shall occur at the working face from the ground (i.e. while off of the equipment) while waste is being disposed. Unauthorized wastes shall be removed from the site for proper disposal in accordance with the *Operations Plan* [ref. SC#A.2.a(1)].

h. Site Inspections.

1) The owner or operator shall inspect the site for erosion and settlement (low spots and improperly graded areas) daily on operating days. Erosion and settlement shall be repaired in accordance with Specific Condition #C.7.

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.1.h., cont'd)

2) The owner or operator shall inspect the landfill facility for the presence of objectionable odors at the property boundary **daily on operating days**. In the event that objectionable odors are detected at the property boundary, the owner or operator shall abate the odors in accordance with Specific Condition #C.6.

3) The owner or operator shall inspect the normal traffic areas of the facility for litter **daily**. The property boundaries shall be inspected for litter **at least weekly**. Litter shall be collected and disposed of in the Class I landfill, **at least once per day**, or more often as necessary. In the event that the litter control program is ineffective, the operator shall notify the Department, and implement additional litter control measures within 30 days.

i. In the event of fire, hurricane or other severe natural event, inoperable equipment, lack of qualified personnel, or stormwater control problems which allow prolonged (greater than 72 hours) contact of ponded water with waste, the facility shall cease disposing waste in the affected area until appropriate drainage has been restored.

j. Equipment. In the event of equipment breakdown or scheduled maintenance, the owner or operator shall ensure that sufficient reserve equipment is operating at the site within 48 hours of the occurrence [ref. SC#A.2.a(1), L.2.b.1]. In the event that sufficient reserve equipment is not obtained within 48 hours, the permittee shall notify the Department in accordance with Specific Condition #C.7.b., below and provide a schedule for corrective actions.

k. Fires. In the event of a fire which requires offsite assistance from the local fire protection authorities, the Department shall be notified pursuant to Specific Condition C.7.b. below, and the owner or operator shall cease disposal of waste in the affected area until the fire has been completely extinguished, or as otherwise specified by the Department. Trenches cut into the waste shall not be used to extinguish the fire without prior Department approval.

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.1., cont'd)

1. <u>Special Wastes.</u> The design, operation, and monitoring of disposal or control of any "special wastes" shall be in accordance with the **Operation Plan** [ref. SC#A.2.a(1), Figure L-1, §L.2.c., and Landfill Recycling Plan, Attachment L-13] and with Rules 62-701.300(8) and 62-701.520, F.A.C., and any other applicable Department rules, to protect the public safety, health and welfare. The special wastes shall be stored and managed such that residues or other contaminants are not spilled, leaked, dumped, or otherwise discharged onto the soil or into surface or groundwaters. The special wastes shall be handled on a first-in, first-out basis. The special wastes shall be stored in a location which does not interfere with the sequence of filling.

1) Wastes which may include residual contaminants (such as gasoline, oil, paint, antifreeze, PCBs, etc.) shall be stored and managed such that the residues or constituents thereof are not spilled, leaked, dumped, or otherwise discharged onto the soil or into surface or groundwaters.

2) Special wastes (such as lead acid batteries, white goods, etc.), found at the working face, shall be stored in locations which do not adversely affect the sequence of filling, and shall be managed as described in the *Operations Plan*. These wastes shall be removed from the site for proper recycling or disposal at the frequency described in the *Operation Plan* and this permit, unless another frequency for removal is approved in writing by the Department.

3) <u>Asbestos.</u> Asbestos shall be managed in accordance with Rule 62-701.520(4), F.A.C., the Operation Plan, and all other applicable federal and Department rules. The asbestos shall be covered by a minimum of six (6) inches of soil prior to additional loads of waste being disposed in the same location.

4) <u>Contaminated Soil</u>. Contaminated soil shall be disposed within the working area and shall have representative analytical results demonstrate that the material is not hazardous and that the material has been adequately dewatered prior to delivery so that the material passes the paint filter test.

ations PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.1.1., cont'd)

5) White Goods and lawn mowers. The white goods shall be removed from the site at least monthly (every 30 days). White goods which may contain chlorofluorocarbons (CFCs, such as freon), shall be stored and managed in a manner such that the CFCs are not discharged to the atmosphere. White goods which have had the refrigerant appropriately removed, and lawn mowers that have had oil and gasoline appropriately removed, shall be clearly marked. A maximum of 625 (total) white goods and lawn mowers may be stored at the site at any time.

6) <u>Lead acid batteries</u>. Lead acid batteries shall be removed from the site **at least monthly (every 30 days)**. The batteries shall be stored in a manner which prevents the discharge of contaminants to the environment. A maximum of 30 lead acid batteries may be stored onsite at any time.

7) <u>Yard Waste.</u> Yard waste shall be managed in accordance with the Operations Plan, Rule 62-701.320, F.A.C., and the facility's yard trash processing Facility registration. Bagged yard trash or land clearing debris shall not be mulched at the site unless the bags are removed prior to mulching. Mixtures of mulched yard trash/land clearing debris and soil may be used for sideslope stabilization and erosion control in the Class I Landfill.

8) <u>Tires.</u> Waste tires shall be removed from the working face and shall be stored as shown on Figure L-1. Waste tires shall be managed in accordance with permit #126775-001-WT, or its successors. The tires shall be stored in a container, and in a manner which prevents nuisance conditions and vectors (i.e. mosquitoes, rats, etc.).

9) <u>Electronics.</u> Electronics to be recycled shall be stored in an undamaged condition, and removed at least **monthly (every 30 days)**. Electronics that have been damaged (such as broken into pieces) shall be removed and stored in a covered containment area to prevent contact with rainfall and related discharge, and removed at least **monthly (every 30 days)**. A maximum of 200 electronic devices may be stored at the site at any time.

m. <u>Household Hazardous Waste (HHW)</u>. Household hazardous waste shall be managed in accordance with the *Operations Plan* [ref. SC#A.2.a(1), Figure L-1, §L.2.c.] and shall be removed from the site for proper disposal **at least monthly**.

1) HHW shall be identified, and then segregated for storage within the containment areas by the end of each working day.

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.1.m., cont'd)

2) Spillage shall be removed and properly packaged for disposal. Soils which have been contaminated by spills shall be removed and packaged for proper disposal on the same day as the spill occurred.

3) Liquids, including contaminated rainwater, shall not be discharged outside of the containment structures.

4) HHW received at the facility shall be stored within containment areas at all times.

2. Operating Personnel.

a. The owner or operator shall be responsible for operating and maintaining the facility in an orderly, safe, and sanitary manner.

b. Sufficient trained personnel shall be available, to adequately operate the facility in compliance with this permit and Department rules. As required by Rule 62-701.500(1), F.A.C., at least one trained operator shall be at the Class I landfill at all times when the landfill receives waste. At least one trained spotter shall be at the working face when waste is received and unloaded, to inspect each load of waste from the ground (while off of the equipment), and to identify and properly manage prohibited materials.

c. The permittee shall notify the Department in writing of a change of the County's primary on-site supervisor within 7 days of the effective start date of this new responsible individual. Training documentation shall be maintained at the landfill site, and copies shall be provided to the Department upon request.

3. **Control of Access**. Access to, and use of, the facility shall be controlled as required by Rule 62-701.500(5), F.A.C. Adequate access to the working face shall be provided for all weather conditions while the facility is receiving waste for disposal.

4. Monitoring of Waste.

a. Wastes shall be monitored as required by Rule 62-701.500(6), F.A.C., including a load checking program and associated activities. The owner or operator shall conduct three random load checks per week at the active working face. Documentation of the three random load checks, including descriptions (type and quantity) of unacceptable wastes discovered, shall be maintained on-site, and copies provided to the Department upon request. Load checks shall document the occurrence, type of unacceptable wastes, removal and disposition of unauthorized wastes discovered in the loads.

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.4., cont'd)

b. The permittee shall not accept hazardous waste or any hazardous substance at this site. Hazardous wastes are wastes listed in 40 CFR 261 Subpart D as hazardous or are wastes characterized in 40 CFR 261 Subpart C as hazardous. Hazardous substances are those defined in Section 403.703, Florida Statute or in any other applicable state or federal law or administrative rule. Sludges or other wastes which may be hazardous should be disposed of in accordance with Rules 62-701.300(4) and 62-701.500(6)(b), F.A.C. In the event that hazardous wastes are discovered, the Department shall be notified in accordance with Specific Condition #C.7.

c. The permittee shall maintain a program which prohibits the disposal of bulk industrial wastes which operating personnel reasonably believe to either be or contain hazardous waste, without first obtaining a chemical analysis of the material showing the waste to be non-hazardous. The chemical analysis of any such material so placed in the landfill, along with the customer's name and date of disposal, shall be kept on file by the operating authority on-site.

d. Sludges generated from onsite processes (e.g., stormwater or leachate system maintenance) shall be dewatered and adequately characterized as nonhazardous prior to disposal.

5. Stormwater Management.

a. This site shall have a surface water management system designed, constructed, operated, and maintained to prevent surface water from running onto waste filled areas, and a stormwater runoff control system designed, constructed, operated, and maintained to collect and control stormwater to meet the requirements of Chapter 62-330, F.A.C., Rule 62-701.500(10), F.A.C., and any other applicable Department rules or requirements of the water management district.

b. The permittee shall operate the facility, maintain grades, or utilize berms and swales, to prevent ponded water within the disposal areas.

c. All stormwater conveyance structures, inlets, overflow structure, and ponds shall be inspected weekly and following all storm events of 0.5 inches or greater [ref. Operation Plan, §L.2.h.3.]. Documentation of the findings of these inspections shall be kept and a copies of this documentation available for Department inspection upon request.

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

6. Control of Nuisance Conditions.

a. The owner or operator shall control odors, vectors (mosquitoes, other insects, rodents), and fugitive particulates (dust, smoke) arising from the operation so as to protect the public health and welfare. Such control shall minimize the creation of nuisance conditions on adjoining property. Complaints received from the general public, and confirmed by Department personnel upon site inspection, shall constitute a nuisance condition, and the permittee must take immediate corrective action to abate the nuisance.

b. In the event that the odor control measures performed at the facility, do not sufficiently abate objectionable odors offsite, the owner or operator shall submit an odor abatement plan to the Department within sixty (60) days of initial detection. The odor abatement plan shall include at a minimum, a description of the proposed corrective actions and a schedule for implementation.

7. Facility Maintenance and Repair.

a. The site shall be properly maintained including maintenance of access roads to disposal areas, equipment, stormwater and leachate management systems, cover systems and berms, gas monitoring system, surface water monitoring system, and groundwater monitoring system. Erosion and ponded water in disposal areas shall be prevented.

b. In the event of damage to any portion of the landfill site facilities, unauthorized leachate discharge, failure of any portion of the landfill systems (including damaged or dry groundwater monitoring wells), fire, explosion, the development of sinkhole(s) or other subsurface instability at the site, the permittee shall **immediately (within 24 hours)** notify the Department explaining such occurrence and remedial measures to be taken, method to prevent reoccurrence, and time needed for repairs. Written, detailed notification shall be submitted to the Department within seven (7) days following the occurrence. Routine maintenance does not require notification but shall be noted on daily reports.

c. In the event that any portion of the groundwater monitoring system is damaged or unable to be sampled, corrective actions shall be completed within sixty (60) days of the written notification specified in Specific Condition #C.7.b., unless otherwise approved by the Department. Corrective actions which include relocation or installation of new groundwater monitoring wells shall be in accordance with Specific Condition #E.5., or as otherwise approved by the Department.

d. In the event that the stormwater or leachate management systems are damaged or are not operating effectively, corrective actions shall be implemented within thirty (30) days of the written notification specified in Specific Condition #C.7.b., unless otherwise approved by the Department.

Ations PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.7., cont'd)

e. Intermediately covered areas, or areas which discharge to the stormwater management system, which exhibit significant erosion shall be repaired as indicated in the Operation Plan, SL.7.k. [ref. SC#A.2.a(1)], and this specific condition. For the purposes of compliance with this Specific Condition, "significant" means that:

1) The soil cover materials have eroded such that greater than 50% of the soil cover in that location has been eroded. **Repair within 7 days of detection;** or

2) Waste or liner is exposed. Repair within 48 hours of detection, or by the close of the next business day, whichever occurs first.

f. Areas which have received final cover, and which exhibit significant erosion as defined above, shall be repaired within 72 hours of detection.

g. <u>Settlement</u>. Areas which exhibit settlement (low spots and improperly graded areas) that may cause ponding of water shall be repaired (additional soil placed, regraded, seeded and/or sodded) within seven (7) days.

8. Waste Handling Requirements. All solid waste disposed of in the Class I landfill shall be covered as required by Rule 62-701.500(7), F.A.C.

a. <u>Initial Cover</u>. Initial cover shall be applied and maintained at the end of each working day in the Class I landfill in accordance with Rule 62-701.500(7)(e), F.A.C., so as to protect the public health and welfare.

1) All solid waste disposed of in the Class I landfill must be covered with at least 6 inches of compacted earth or other suitable material as approved by the Department (in writing), at the end of each working day. Working areas which have received initial cover and exhibit erosion which results in exposed waste shall be repaired **by the end of the next working day**.

2) Materials which have been previously used for intermediate or initial cover shall not be re-used for intermediate cover. These materials may be re-used as initial cover provided the runoff from these areas is managed as leachate.

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.8.a., cont'd)

3) Runoff from areas with initial cover may be considered uncontaminated stormwater only if the area

a) is adequately covered with a tarp or rain cell cover; **OR**

b) has 6-inches of soil (not ADCM) cover with no visible waste exposed, **AND**

- c) has no evidence of leachate seepage, AND
- d) has no evidence of erosion.

b. Intermediate Cover. Intermediate cover shall be applied and maintained in accordance with Rules 62-701.500(7)(a) and (f), F.A.C. Cover materials other than soil (unless identified herein) shall not be used for intermediate cover without prior written Department approval.

1) An intermediate cover of 12 inches of compacted soil in addition to the six (6) inch initial cover shall be applied within seven (7) days of cell completion if final cover or an additional lift is not to be applied within 180 days of cell completion.

2) Contaminated soils shall not be used for intermediate cover. These materials may be used for initial cover provided the runoff from these areas is managed as leachate. Analyses of the contaminated soils which demonstrate that the soils are not hazardous shall be maintained on-site, and copies provided to the Department upon request.

3) A mixture of soil and screened compost or mulch (1/2 inch screen, 25% soil, 75% compost/mulch) may be used for intermediate cover [ref. Operation Plan, §L.7.g.].

4) Sod shall be applied within 30 days to all intermediately covered (external) sideslope areas that have reached designed dimensions.

с. Alternate daily (initial) cover materials (ADCM) shall be approved by the Department prior to use at the facility. For those areas where solid waste will be deposited on the working face within 18 hours, the following materials are approved for use as alternate initial cover: tarps; tire chips; 50/50 mixtures of soil/mulch or soil/compost; 50/50 mixtures of shredded asphalt shingles and soil; shredded C&D debris or RSM [see Operation Plan, §L.2.g., §L.7., §L.7.e., and Attachment L-10]. Other Department- approved ADCM may be used as initial cover only, but shall not be used outside of lined areas without specific prior Department approval. Yard trash (compost or mulch), screened or unscreened, and then mixed in the ratio of 50% compost (or mulch) to 50% soil, and applied in a six (6) inch compacted layer, may be used as initial or intermediate cover. The processed yard trash shall not contain particles greater than six inches and shall not contain plastic.

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

9. Working Face.

a. As required by Rule 62-701.500(7)(d), F.A.C., the permittee shall minimize the size of the working face to minimize leachate, and unnecessary use of cover material. The permittee shall maintain the working face of a cell only wide enough to efficiently accommodate the maximum quantity of vehicles discharging waste simultaneously and to minimize the exposed area.

b. Waste shall be spread and compacted in accordance with the *Operation Plan*. Slopes shall be maintained in accordance with the *Operations Drawings*. The working face and all above grade slopes shall be no greater (steeper) than **3H:1V** [ref. SC#A.2.a(1), §L.2.f.].

c. Berms and/or swales shall be maintained to prevent leachate runoff from the working face from entering the stormwater management system. Runoff from outside the working face area will not be considered stormwater if the flow passes over areas which have not been intermediately covered as defined by Rule 62-701.200(55), F.A.C., and stabilized to control erosion.

10. Method and Sequence of Filling.

a. The method and sequence of filling shall be in accordance with *Operations Drawings* [ref. SC#A.2.b.], and as described in the *Operation Plan* [ref. SC#A.2.a(1)], or as otherwise approved in writing by the Department.

11. Leachate Management.

a. Leachate shall be managed in accordance with the requirements of Rule 62-701.500(8), F.A.C., the **Operation Plan** [ref. SC#A.2.a(1)], and other applicable Department rules.

b. Leachate and potentially contaminated stormwater which has accumulated in low areas within the disposal area shall be removed **daily** for disposal, and <u>shall not be</u> recirculated into the landfill as described in the *Operation Plan* [ref. SC#A.2.a(1), see §L.2.h.3. and Attachment L-3, Figures L-6 and L-7]. In the event that permittee elects to recirculate leachate into the landfill, a minor modification shall be requested pursuant to Specific Condition #A.3.



cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.11., cont'd)

c.

Leachate Collection and Removal System (LCRS) Inspections/Maintenance.

1) Between January 1, 2009 and July 1, 2009, an inspection (videotape or other appropriate assessment as approved by the Department) of the leachate collection system (LCS) shall be conducted. A report for this inspection shall include an evaluation of the effectiveness of the system, the location (indicated on a Site Plan drawn to scale) and cause of all obstructions encountered, proposed corrective actions and schedule for implementation of corrective actions as appropriate. The permittee shall retain a copy of the videotape at the facility for reference. No later than August 1, 2009, a final report summarizing the inspection results (with a copy of the inspection report) and describing the related corrective actions (repairs) if required (with photographic documentation for all repairs and a copy of the inspection videotape) shall be submitted to the Department to verify adequate performance of the leachate collection and removal system. The final report shall be signed and sealed by a professional engineer. The permittee shall retain a copy of the final report, each inspection report and inspection videotape at the facility for reference, and shall provide a copy to the Department upon request.

2) Unless otherwise specified in this permit, the leachate collection and removal system components shall be inspected and maintained as described in the *Operation Plan* [ref. SC#A.2.a(1)].

3) The leachate level indicators at the leachate storage tank shall be inspected at least once each business day, or more frequently if needed, to ensure proper operation.

4) The operation of each pump, related sensors and controller mechanisms, and pump stations shall be verified on each operating day. Pumps showing reduced performance shall be removed for maintenance and repair, and a replacement pump installed if required for continued compliance.

4) In the event that the pumps, pump stations or level sensors are not operating as designed, the Department shall be notified in accordance with Specific Condition #C.7.b. Otherwise, documentation of all inspections shall be kept on file at the facility, and provided to the Department upon request.

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.11.c., cont'd)

5) Upon the discovery of any defective (obstructed, separated, deformed) portion of the leachate collection system, the disposal of waste in the affected area shall cease in the affected area until the leachate collection system performance has been restored. Construction of improvements to any part of the LCRS, including significant repairs to the leachate collection system, may require a permit modification pursuant to Specific Condition #A.3. The design and related supporting documents for the construction of improvements shall be substantially equivalent to those required for new construction.

6) Leachate tank inspections.

a) The exposed exterior of the leachate storage tank shall be inspected **at least weekly** for defects, leaking and other deficiencies. The containment area, truck loadout area, and other leachate tank system appurtenances shall be inspected at least <u>daily</u> for leakage or other damage.

b) Within sixty (60) days of the date of issuance of this permit, the permittee shall provide a copy of the interior tank inspection report that was conducted in 2004.

C) The leachate storage tank system shall be inspected as required by Rule 62-701.400(6)(c)9., F.A.C., and in accordance with the conditions of this permit. No later than February 1, 2007 and February 1, 2010, the interior of the tank shall be inspected. A copy of the inspection report shall be submitted to the Department within 30 days of the inspection. In the event that deficiencies are noted in the inspection report, within fifteen (15) days of the owner's receipt of the written inspection report, the owner or operator shall propose corrective measures (including a schedule for implementation) to the Department. The deficiencies shall be corrected in accordance with the schedule approved by the Department.

d) Liquids that accumulate in the tank secondary containment area shall be tested as described in the *Operation Plan* [ref. SC#A.2.a(1)], Section L.2.h.2. Records of these test results shall be maintained on-site and provided to the Department upon request.



cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.11., cont'd)

d. Leachate quantities.

1) In the event of a failure of leachate metering or pumping equipment which is not corrected within 24 hours of detection, the Department shall be notified, and corrective actions implemented in accordance with Specific Condition #C.7.

2) Leachate generation reports shall be compiled monthly and submitted to the Department **quarterly**, by January 15th, April 15th, July 15th and October 15th each year. Leachate generation reports shall include precipitation amounts, the number of open, intermediate and closed acres, leachate levels (elevations) in the leachate piezometer, and the quantities of leachate collected, stored, and hauled offsite to a wastewater treatment facility.

e. No later than **thirty (30) days** prior to the expiration of any contracts or agreements for the disposal of leachate at wastewater treatment facilities, the permittee shall provide a copy of the contract renewal or the issuance of a new contract for leachate disposal.

f. In the event that the primary leachate disposal facility becomes unable or unwilling to accept leachate for disposal, within three (3) days of the cessation of leachate acceptance by the POTW, the landfill owner or operator shall notify the Department and shall explain the contingency measures which will be implemented. The contingency measures shall be implemented within seven (7) days of the cessation of leachate acceptance at the POTW or in accordance with an alternate schedule approved by the Department.

g. The Class I disposal area shall be operated to limit the leachate head to one foot above the liner as described in Section L.8. of the Operations Plan.

12. Reuse of Leachate for Dust Control.

a. Small quantities of leachate may be reused within the active cells as an alternate dust control measure in accordance with Section L.11.d., of the Operation Plan [ref. SC #A.2.a(1)]. The landfill operator shall monitor the rate of leachate application, soil (cover material) moisture conditions, and the specific landfill areas used to prevent the generation of leachate runoff. Leachate shall only be reused for dust control under the following conditions:

1) Leachate may only be sprayed on active, bermed, disposal areas, including the working face and areas with the required six (6) inches of initial cover with a maximum slope of 10H:1V;

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART C - Operation Requirements

(Specific Condition #C.12.a., cont'd)

2) Leachate shall not be sprayed on areas with intermediate or final cover or within 150 feet of a sideslope steeper than 4H:1V;

3) The areas receiving leachate shall be controlled at all times to prevent run-off from entering the stormwater system;

4) Leachate shall not be sprayed when the application area is in a saturated condition (as evidenced by ponding water or pumping soils) or during a rainfall event;

5) The application rate of leachate must be such that the leachate does not accumulate on the landfill surface but infiltrates quickly into the covered refuse;

6) Leachate shall not be sprayed at the end of the day on the initial cover of the working face or other areas. Spraying shall be done early in the morning after any dew evaporates and continue until early afternoon or until all available areas have been utilized; and

7) Leachate shall not reused or sprayed outside the lined disposal area.

b. The following shall be recorded each day leachate is reused for dust control:

Quantity of leachate sprayed (gal/day);

2) Rainfall onsite (inches/day and time/duration of rainfall occurrence); and

3) Observed runoff of leachate to retention area (yes/no, inspection time and quantity if yes).

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART D - Recordkeeping

1. Operation Plan and Operating Record.

a. Each landfill owner or operator shall have an operational plan which meets the requirements of Rule 62-701.500(2), F.A.C. A copy of the Department approved permit, operational plan, construction reports and record drawings, and supporting information shall be kept at the facility at all times for reference and inspections. Operating records as required by Rule 62-701.500(3), F.A.C., are part of the operations plan, and shall also be maintained at the site.

b. Proposed changes to the current Department-approved **Operation Plan** [ref.SC#A.2a(1)] shall be submitted in writing to the Department for review and may require a permit modification in accordance with Specific Condition #A.3. The **Operation Plan** shall be updated as operations change and for renewal of the permit. Revised pages shall be provided as replacement pages with revisions noted (deletions may be struckthrough (struckthrough) and additions may be shaded (shaded) or a similar method may be used) and each page numbered with the document title and date of revision.

c. Unless specified otherwise in this permit, all submittals, notifications, requests for permit modification, etc. shall be provided to the Southwest District Solid Waste Section, 3804 Coconut Palm Drive, Tampa, Fl. 33619.

d. The following reports, documents and other information shall be kept at the facility for reference, and copies shall be provided to the Department upon request:

1) Waste quantity reports required by Rule 62-701.500(4), F.A.C.

2) A log of the facility operator's daily and weekly inspections, and any subsequent corrective actions;

3) Load checking records;

4) A list of incidents of disposal of contaminated soil or other industrial wastes or sludges. This list should include the generator's name and address, and a description of the waste disposed; and

5) Operator and spotter training certificates and other documentation;

6) Log of odor complaints and corrective action; and

7) Records as described in Rule 62-701.500(13). These records shall include all certifications for construction completion.

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART D - Recordkeeping

(Specific Condition #D.1.d., cont'd)

8) Log of discharges from leachate storage tank secondary containment area [ref. *Operation Plan*, §L.2.h.2.].

e. <u>Capacity Report.</u> The owner or operator shall conduct a topographic survey of, and shall estimate the remaining disposal capacity and site life of each disposal area as required by Rule 62-701.500(13)(c), F.A.C. **Annually, no later than April 15th each year**, a copy of this survey, supporting capacity calculations, signed and sealed by a registered professional engineer and/or licensed professional land surveyor as appropriate shall be submitted to the Department. The survey shall demonstrate that the above-grade sideslopes are no greater than the design exterior sideslopes (3H:1V), that the top elevation does not exceed design elevation, and that all other design features and related improvements conform to the Department-approved **Operations Drawings**.

2. Waste Records.

a. Waste records shall be maintained as required by Rule 62-701.500(4), F.A.C. The owner or operator of the facility shall weigh each load of waste as it is received (with scales at the facility) and record, in tons per day, the amount of waste debris and material received. This information shall be compiled **monthly** and submitted to the Department (Solid Waste Section, Department of Environmental Protection, 2600 Blair Stone Road, M.S. 4565, Tallahassee, Florida 32399-2400) **quarterly**, by January 15th, April 15th, July 15th and October 15th of each year. Waste shall not be accepted for disposal at the landfill unless weight scales are available at the facility and are in proper working condition.

b. Records shall be kept for all recycled electronics, including the quantities sent to each recycler, and related receipts with the name and address of each recycler.

3. **Financial Assurance**. The permittee shall provide adequate financial assurance for this facility and related appurtenances in accordance with Rule 62-701.630, F.A.C.

a. All costs for closure shall be adjusted and submitted for approval **annually**, **by September 1st each year** to: Solid Waste Manager, Solid Waste Section, Department of Environmental Protection, 3804 Coconut Palm Drive, Tampa, Florida 33619-8318.

b. Proof that the financial mechanism has been adequately funded shall be submitted **annually** to: Financial Coordinator, Solid Waste Section, Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

1. Water Quality Monitoring Quality Assurance.

a. All field work done in connection with the facility's Water Quality Monitoring Plan shall be conducted in accordance with the Standard Operating Procedures (SOPs) described in DEP-SOP-001/01 (February 1, 2004), as referenced in Rule 62-160.210(1), F.A.C. All laboratory analyses done in connection with the facility's Water Quality Monitoring Plan shall be conducted by firms that hold certificates from the Department of Health Environmental Laboratory Certification Program under Chapter 64E-1, F.A.C., as referenced in Rule 62-160.300(1), F.A.C. The SOPs utilized and the laboratory's list of certified test methods and analytes must specifically address the types of sampling and analytical work that are required by the permit and shall be implemented by all persons performing sample collection or analysis related to this permit. Alternate field procedures and laboratory methods may be used if approved according to the requirements of Rules 62-160.220 and 62-160.330, F.A.C., respectively.

b. The field testing, sample collection and preservation, and laboratory testing, <u>including the collection of quality control</u> <u>samples</u>, shall be in accordance with the requirements of and methods approved by the Department in accordance with Rule 62-4.246 and Chapter 62-160, F.A.C. Approved methods published by the Department or as published in Standard Methods, or by A.S.T.M., or EPA methods shall be used.

2. Zone of Discharge.

a. The zone of discharge for this landfill shall extend horizontally 100 feet from the limits of the landfill liner or to the property boundary, whichever is less, and shall extend vertically to the bottom of the surficial aquifer.

b. The permittee shall ensure that the water quality standards and minimum criteria for Class G-II ground waters will not be exceeded at the boundary of the zone of discharge according to Rule 62-520.420, F.A.C., and that the minimum criteria listed in Rule 62-520.400, F.A.C., will not be exceeded outside the footprint of the landfill.
SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

3. Ground Water Monitor Well Locations. The ground water monitoring plan is described in the submittal entitled <u>Groundwater Monitoring Plan Addendum</u>, <u>Central County Solid Waste Disposal Complex</u>, Sarasota County, Florida [ref. SC# A.2.a(2)]. The active monitor well locations for the facility shown on Figure L-1, prepared by SCS Engineers, received November 18, 2004 (attached), are described as follows:

	WACS Testsi	te				
Well No.	ID No.	Aquifer	Designation	Location		
MW-1R *	20585	Surficial	Background	See Figure		
L-1			2	-		
MW-2R *	20586	Surficial	Background	Û		
MW-4R *	20587	Surficial	Background	Ŷ		
MW-8A *	21455	Surficial	Detection	Û		
MW-9	4509	Surficial	Detection	Û		
MW-10R	4510	Surficial	Detection	Û		
MW-11R *	20588	Surficial	Detection	Û		
MW-12R *	20589	Surficial	Detection	Û		
MW-1 **	4501	Surficial	Abandoned	$\hat{\Gamma}$		
MW-2 **	4502	Surficial	Abandoned	Û		
MW-4 **	4504	Surficial	Abandoned	Û		
MW-8 **	4508	Surficial	Abandoned	Û		
MW-11 **	4511	Surficial	Abandoned	Û		
MW-12 **	4512	Surficial	Abandoned	Û		
MW-3	4503	Surficial	Piezometer	Û		
MW-5	4505	Surficial	Piezometer	Û		

* = to be installed within 90 days of permit issuance in accordance with the construction details provided in Tables 4-1a and 4-1b of the Groundwater Monitoring Plan Addendum [ref. SC#A.2.a(2)], except for the construction details for well MW-8A provided in the SCS Engineers letter dated and received November 18, 2004; documentation of well construction details as indicated in Specific Condition No. E.5.b., shall be submitted within 30 days of well installation; initial sampling shall be conducted within 7 days of well installation and development in accordance with Specific Condition No. E.4.b.; results of initial sampling shall be submitted within 30 days of receipt from the analytical laboratory.

** = to be abandoned within 90 days of permit issuance; documentation of well abandonment as indicated in Specific Condition No. E.6., shall be submitted within 30 days of well abandonment.

An updated survey drawing as described in Specific Condition No. E.5.d., shall be submitted within 30 days of installation of the proposed wells (MW-1R, MW-2R, MW-4R, MW-8A, MW-11R and MW-12R); this drawing shall <u>also</u> include the locations and elevations for the <u>existing</u> wells (MW-9 and MW-10R) and piezometers (MW-3 and MW-5) to comply with the responses to review comments provided in the letter prepared by SCS Engineers dated March 31, 2004.

All wells are to be clearly labeled and easily visible at all times. The permittee should keep all wells locked to minimize unauthorized access.

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

4. Ground Water Sampling. The locations, parameters, and frequencies specified herein represent the minimum requirements for ground water monitoring. Additional samples, wells, and parameters may be required based upon subsequent analysis. Method Detection Limits must be reported at or below the Maximum Contaminant Levels established for the individual parameters to demonstrate compliance with Class G-II ground water standards referenced in Chapter 62-520, F.A.C. Compliance with ground water standards will be based on analysis of unfiltered samples.

a. Ground water elevations shall be measured at all active wells and piezometers listed in Specific Condition No. E.3., for all sampling events described in Specific Condition Nos. E.4.b., E.4.c., and E.9.d., to a precision of 0.01 foot. The water surface contour maps prepared for each sampling event shall include ground water elevations (feet NGVD) calculated for each well and piezometer, and surface water elevations (feet NGVD) calculated for each pond.

b. An <u>initial</u> sampling event at wells MW-1R, MW-2R, MW-4R, MW-8A, MW-11R and MW-12R shall be conducted **within 7 days of well installation and development** for analysis of the following parameters:

Field Parameters

Static water levels
 before purging
Specific conductivity
pH
Dissolved oxygen
Temperature
Turbidity
Colors & sheens
 (by observation)

Laboratory Paramete	ers
Total ammonia - N	Calcium
Bicarbonate	Iron
Carbonate	Magnesium
Chlorides	Mercury
Nitrate	Potassium
Sulfate	Sodium
Total dissolved solids (TDS)	
Those parameters listed in	
40 CFR Part 258, Appendix II	

Results of initial sampling shall be submitted within 30 days of receipt from the analytical laboratory.

c. The background wells (MW-1R, MW-2R and MW-4R) and detection wells (MW-8A, MW-9, MW-10R, MW-11R and MW-12R) shall be sampled **semi-annually** for analysis of the following parameters:

Field Parameters	Laboratory Parameters		
Static water levels	Total ammonia - N	Calcium	
before purging	Bicarbonate	Iron	
Specific conductivity	Carbonate	Magnesium	
рН	Chlorides	Mercury	
Dissolved oxygen	Nitrate	Potassium	
Temperature	Sulfate	Sodium	
Turbidity	Total dissolved solids(TDS)		
Colors & sheens	Those parameters listed in		
(by observation)	40 CFR Part 258, Appendix I		

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex . •

SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

5. Ground Water Monitor Well Construction. The following information shall be submitted within 90 days of installation of <u>all</u> new or replacement wells, or as stated below:

a. <u>Prior to</u> construction of all new or replacement wells (<u>excluding</u> wells MW-1R, MW-2R, MW-4R, MW-8A, MW-11R and MW-12R) the permittee shall request and receive Department approval of a minor permit modification.

b. Construction details (record drawings) for <u>all</u> new or replacement wells and piezometers shall be provided to the Department's Southwest District Office on Department Form No. 62-522.900(3), Monitor Well Completion Form (**attached**).

c. Within one week of well completion and development, each new or replacement well shall be sampled for the parameters listed in Rules 62-701.510(8)(a) and 62-701.510(8)(d), F.A.C.

d. A surveyed drawing shall be submitted in accordance with Rule 62-701.510(3)(d)(1), F.A.C., showing the location of all monitoring wells and piezometers (active and abandoned), horizontally located in degrees, minutes and seconds of latitude and longitude, and showing the elevation of the top of the well casing to the nearest 0.01 foot, National Geodetic Vertical Datum. The surveyed drawing shall include the monitor well identification numbers, locations and elevations of all permanent benchmarks and/or corner monument markers at the site. The survey shall be conducted by a Florida Registered Surveyor.

6. Well Abandonment. All wells and piezometers not a part of the approved Water Quality Monitoring Plan and not listed in Specific Condition No. E.3., are to be plugged and abandoned in accordance with Rule 62-532.440, F.A.C., and the Southwest Florida Water Management District (SWFWMD). Documentation of abandonment shall include a map showing well/piezometer locations and SWFWMD abandonment records. The permittee shall submit a written report to the Department providing verification of the well abandonment within 30 days of abandonment. A written request for exemption to the abandonment of a well must be submitted to the Department's Solid Waste Section for approval.

7. Verification/Evaluation Monitoring. If at any time monitoring parameters are reported in the detection wells at concentrations significantly above background water quality, or exceed the Department's water quality standards or minimum criteria, the permittee has 30 days from receipt of the sampling results to resample the monitor well(s) to verify the original analysis. Should the permittee choose not to resample, the Department will consider the water quality analysis to be representative of current ground water conditions at the facility. If the data is confirmed, or if the permittee chooses not to resample, the permittee shall notify the Department within 14 days of this finding. Upon notification by the Department, the permittee shall initiate evaluation monitoring, prevention measures and corrective action as described in Rule 62-701.510(7), F.A.C.

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

8. Leachate Sampling. Leachate samples shall be collected from each landfill cell that contains waste ("active cell"). Representative leachate samples (<u>unfiltered</u>) shall be collected from the sampling ports at the leachate pump valve boxes for each active cell as shown on Figure L-1A prepared by SCS Engineers, received September 20, 2002 (attached):

Leachate		WACS Testsit		
Sample ID No.	Landfill Cell	ID No.		
C-1	Cell No. 1	20580		
C-2	Cell No. 2	20581		
C-3	Cell No. 3	20582		
C-4	Cell No. 4	20583		
C-5	Cell No. 5	20584		

Leachate sampling shall be conducted in accordance with the Department's SOPs to comply with the requirements of Rules 62-701.510(5) and 62-701.510(6)(c), F.A.C. A composite leachate sample may be prepared from the samples collected from the leachate sampling ports at each active cell for analysis of the *inorganic parameters only* in accordance with the procedure described in Section 2 of the Groundwater Monitoring Plan Addendum, [ref. SC#A.2.a(2)]. Otherwise, individual leachate samples shall be collected from the leachate sampling ports for each active cell for analysis of the following parameters:

a. Semi-annual leachate sampling shall be conducted for analysis of the following parameters:

Field Parameters

Specific conductivity pH Dissolved oxygen Colors & sheens (by observation)

Laboratory	Parameters
Total ammonia - N	Calcium
Bicarbonate	Iron
Carbonate	Magnesium
Chlorides	Mercury
Nitrate	Potassium
Sulfate	Sodium
Total dissolved solids	(TDS)

b. Annual leachate sampling shall be conducted <u>during the second</u> <u>half of each year</u> for analysis of the parameters listed in Specific Condition No. E.8.a., <u>plus the parameters listed in 40 CFR Part</u> <u>258</u>, **Appendix II**.

c. If the leachate analyses indicate that a contaminant listed in 40 CFR Part 261.24 exceeds the regulatory level listed therein, the permittee shall initiate monthly sampling and analysis of the parameters listed in Specific Condition No. E.8.b., and shall notify the Department in writing. Results of the monthly leachate sampling shall be submitted within 30 days of receipt from the analytical laboratory. If in any three consecutive months no listed contaminant is found to exceed the regulatory level, the permittee may discontinue the monthly sampling and analysis and return to a routine sampling schedule.

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

9. Surface Water Sampling.

a. All surface water bodies that may be affected by a contaminant release at the facility shall be monitored, except bodies of water contained completely within the property boundaries of the site which do not discharge from the site to surface waters (Rule 62-701.510(4), F.A.C.). The locations, parameters, and frequencies specified herein represent the minimum requirements for surface water monitoring. Additional samples, sampling locations, and parameters may be required based upon subsequent analysis. Method Detection Limits must be less than or equal to the criteria for each parameter established in Chapter 62-302, F.A.C., to demonstrate compliance with Class III (predominantly fresh water) surface water standards. Compliance with surface water criteria will be based on analysis of <u>unfiltered</u> samples.

b. Surface water elevations shall be measured at the staff gauges located in Pond Nos. 1 through 7 as shown on Figure L-1 prepared by SCS Engineers, received September 2, 2004 (**attached**), to a precision of 0.01 feet for all sampling events described in Specific Condition Nos. E.4.b., E.4.c., and E.9.d.

c. Surface water sample collection points shall be located as shown on Figure L-1 prepared by SCS Engineers, received November 18, 2004 (attached), as follows:

Surface	WACS Testsite	
Water ID No.	ID No.	Location
B2	4519	Old Cow Pen Slough, upstream location
B4R	20060	Old Cow Pen Slough, downstream location

In accordance with Rule 62-701.510(4)(c), F.A.C., the monitoring stations shall be marked and their positions shall be determined by a registered Florida land surveyor in degrees, minutes and seconds of latitude and longitude.

d. Semi-annual surface water sampling shall be conducted at station Nos. B2 and B4R in accordance with Rule 62-701.510(6)(e), F.A.C., for analysis of the following parameters:

Field parameters	Laboratory parameters	
Specific conductivity	Chlorophyll A	Nitrate
рН	Total hardness	Total nitrogen
Dissolved oxygen	Total phosphates	Unionized ammonia
Turbidity	Calcium	Biochemical oxygen demand (BOD,)
Temperature	Copper	Chemical oxygen demand (COD)
Colors and sheens	Iron	Total organic carbon (TOC)
(by observation)	Magnesium	Total dissolved solids (TDS)
Surface water	Mercury	Total suspended solids (TSS)
elevation	Potassium	Fecal coliform
	Sodium	Bicarbonate
	Zinc	Carbonate
		Sulfate
	Those parameters listed in	n 40 CFR Part 258, Appendix I

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART E - Water Quality Monitoring Requirements

10. Water Quality and Leachate Reporting Requirements. All leachate, surface water and ground water guality monitoring results shall be reported on Department Form 62-522.900(2), Groundwater Monitoring Report (attached). The permittee shall submit to the Department the analytical results of the leachate samples (Specific Conditions Nos. E.8.a., and E.8.b.), surface water samples (Specific Condition No. E.9.d.) and ground water samples (Specific Condition No. E.4.c.) by January 15th and July 15th of each year for the semi-annual periods July-December and January-June, respectively. The reports that transmit the results of ground water analysis shall contain the information listed in Rule 62-701.510(9)(a), F.A.C., including a water surface contour map representing conditions at the time of ground water and surface water sampling and a summary of any water quality standards or criteria that are exceeded. The results shall be sent to: Solid Waste Section, Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-1352.

11. Monitoring Plan Evaluation. By February 1, 2007 and no later than August 1, 2009, the permittee shall submit an evaluation of the water quality monitoring data. The periods of time to be covered by the evaluations are summarized below:

Water Quality Monitoring Data Evaluation Due Date	Starting Sampling Event	Ending Sampling Event
February 1, 2007	Second Half 2001	Second Half 2006
August 1, 2009	First Half 2007	First Half 2009

The evaluations shall include the applicable information as listed in Rule 62-701.510(9)(b), F.A.C., and shall include assessment of the effectiveness of the existing landfill design and operation as related to the prevention of ground water contamination. Any ground water contamination that may be reported shall be addressed as part of evaluation monitoring conducted at the facility in accordance with Rule 62-701.510(7), F.A.C. The evaluations shall be sent to: Solid Waste Section, Department of Environmental Protection, Southwest District Office, 3804 Coconut Palm Drive, Tampa, Florida 33619-1352.

ations PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART F - Landfill Gas Management

1. Landfill Gas - NPs and Title V Air Requirements.

a. This solid waste permit will meet the statutory requirement to obtain an air construction permit before modifying or constructing a source of air pollution, except for those landfills that are subject to the prevention of significant deterioration (PSD) requirements of Chapter 62-212, F.A.C. Facilities that are subject to the PSD requirements shall obtain an air construction permit from the Bureau of Air Regulation prior to beginning construction or modification pursuant to Rule 62-210.400, F.A.C.

b. The permittee shall comply with any applicable Title V air operation permit application requirements of Chapter 62-213, F.A.C., and 40 CFR 60, Subparts WWW and CC, as adopted by reference at Rule 62-204.800, F.A.C. Title V Permit applications shall be submitted to the District Air Program Administrator or County Air Program Administrator with air permitting authority for the landfill.

c. The permittee shall submit to the Division of Air Resources Management, Department of Environmental Protection, Mail Station 5500, 3900 Commonwealth Blvd., Tallahassee, FL 32399-3000, any amended design capacity report and any Non-Methane Organic Compound (NMOC) emission rate report, as applicable, pursuant to 40 CFR 60.757(a)(3) and (b).

2. Gas Monitoring and Control.

a. Landfills that receive degradable wastes shall have a gas management system designed to prevent explosions and fires, and to minimize off-site odors, lateral migration of gases and damage to vegetation. Landfill gas shall be monitored and controlled as required by Rule 62-701.530, F.A.C.

b. Landfill gas shall be monitored to demonstrate compliance with the criteria established in Rule 62-701.530(1)(a), F.A.C., (less than 25% of the lower explosive limit (LEL) for combustible gases in structures and less than 100% of the LEL for combustible gases at or beyond the property boundary).

c. The results of quarterly monitoring required by Rule 62-701.530(2)(c), F.A.C., shall be submitted to the Department by the following dates:

Measured During	Report Submitted By
Quarter 1	April 15 th of each year
Quarter 2	July 15 th of each year
Quarter 3	October 15 th of each year
Quarter 4	January 15 th of each year

cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

SPECIFIC CONDITIONS: PART F - Landfill Gas Management

3. Gas Monitoring Locations. The enclosed structures and gas monitoring locations shown on Figure L-1, prepared by SCS Engineers, received November 18, 2004 (attached), shall be sampled at least quarterly for concentrations of combustible gases determined as a percent of the LEL calibrated to methane, as described in Rule 62-701.530(2), F.A.C.

Monitoring		
Point	Location	Location Description
GP-1	Figure L-1	West boundary of landfill cells
GP-2	Û	North boundary of landfill cells
GP-3	$\hat{\mathbf{v}}$	East boundary of landfill cells
GP-7	` Û	North of C&D processing area
GM-1	Û	Contractor's maintenance building and yard
GM-2	Û	C&D processing area
GM-3	Ŷ	County maintenance building
GM - 4	Û	Administration building
GM-5	Û	Scale house
GM-7	Û	Control panel at leachate storage facility

Gas monitoring probes GP-1, GP-2, GP-3 and GP-7 are to be clearly labeled and easily visible at all times.

4. Gas Remediation. If the results of gas monitoring show that combustible gas concentrations exceed 25% of the LEL calibrated to methane in structures or 100% of the LEL calibrated to methane at the property boundary, the permittee shall immediately take all necessary steps to ensure protection of human health and notify the Department. Within 7 days of detection, a gas remediation plan detailing the nature and extent of the problem and the proposed remedy shall be submitted to the Department for approval. The remedy shall be completed within 60 days of detection unless otherwise approved by the Department.

tions PERMIT NO: 130542-002-SO Central County SW Disposal Complex ٠,

SPECIFIC CONDITIONS: PART G - Closure and Long-Term Care Requirements

1. Closure Permit Requirements. No later than ninety (90) days prior to the date when wastes will no longer be accepted for portions of the landfill which have reached closure design dimensions, the landfill owner or operator shall submit a closure permit application to the Department, to assure conformance with all applicable Department rules. A closure permit is required prior to implementing closure related activities.

2. Final Cover. Portions of the landfill which have been filled with waste to the extent of designed dimensions shall be closed (shall receive final cover) within 180 days after reaching design dimensions, in accordance with Rule 62-701.500(7)(g), F.A.C. and all applicable requirements of Department rules.

3. Long-Term Care Requirements.

a. The permittee shall perform long-term care for the facility in accordance with Rule 62-701.620, F.A.C., and the information referenced in Specific Condition #A.2.a.

b. Long-term care includes, but is not limited to, water quality, leachate and gas monitoring, maintenance of the final cover system, maintenance of the leachate collection and removal system, erosion control, and the prevention of ponding within disposal areas.

4. Use of Closed Landfill Areas.

a. There are no currently closed areas of the Class I landfill.

ь. Use of closed landfill areas requires consultation with and approval by the Department **prior to** conducting these activities in accordance with Rule 62-701.610(7), F.A.C. The Department retains regulatory control over any activities which may affect the integrity of the environmental protection measures such as the landfill cover, drainage, final cover materials (soil and vegetation), leachate collection system, bottom liner, monitoring systems or stormwater controls. A plan detailing the proposed activities and evaluation of the potential effects on the landfill systems (including engineering designs, calculation and plans, as appropriate) shall be submitted for Department review to comply with the requirements of the Department's document entitled "Guidance for Disturbance and Use of Old Closed Landfills or Waste Disposal Areas in Florida", dated May 3, 2001, or successor document.

ations PERMIT NO: 130542-002-SO Central County SW Disposal Complex

Executed in Tampa, Florida.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Deborah A. Getzoff District Director Southwest District



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ATTACHMENT 1			
Specific Condition	Submittal Due Date	Required Item	
A.4.	No later than August 1, 2009	Submit permit renewal application	
A.9.b.	Within 24 hours of discovery Within 7 days of verbal notification	Notification of sinkholes or subsurface instability Written notification & corrective action plan	
B.1.a.	Within 60 days of completion	Submit certification of construction completion, record drawings, etc.	
C.7.b.	Within 24 hours of discovery	Notification of: hazardous waste receipt, failure of landfill systems or equipment	
	Within 7 days of verbal notification	Written notification & corrective action plan	
C.7.c.	Within 60 days of written notification	Complete corrective actions for gradient or groundwater monitoring system	
C.7.d.	Within 30 days of written notification	Implement corrective actions for leachate management system	
C.11.c.	No later than August 1, 2009	Submit final leachate assessment report, videotape, inspection results, etc.	
C.11.c(6)(b)	Within 60 days of permit issuance	Submit copy of tank inspection report for 2004	
C.11.c(6)(c)	By February 1, 2007 and February 1, 2010	Conduct inspection of interior of tank	
C.11.d(2) F.2.c.	Quarterly, by January 15 th April 15 th July 15 th October 15 th each year	Submit leachate generation reports Submit gas monitoring results	
D.1.e.	Annually, by April 15 th each year	Submit Topographic survey & remaining capacity calculations	
D.3.a.	Annually, by September 1 st each year	Submit revised cost estimates	
D.3.b.	Annually	Submit proof of funding	

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cions PERMIT NO: 130542-002-SO Central County SW Disposal Complex

ATTACHMENT 1			
Specific Condition	Submittal Due Date	Required Item	
E.3.	Within 90 days of permit issuance	Install wells MW-1R, MW-2R, MW-4R, MW- 8A, MW-11R, MW-12R	
E.3.	Within 30 days of installation	Provide well construction information	
E.3., E.4.b.	Within 7 days of well development	Conduct initial sampling for MW-1R, MW-2R, MW-4R, MW-8A, MW-11R and MW-12R	
E.3.	Within 30 days of receipt of results	Submit initial sampling results	
E.3.	Within 30 days of installation	Submit updated survey of all wells and piezometers	
E.4.c.	Semi-annually	Sample background, detection and downgradient wells	
E.5.a.	Prior to installation of new wells	Request permit modification, Provide construction details for wells	
E.5.	Within 90 days of installation of new wells	Submit well construction details and survey	
E.5.c.	Within 1 week of well development	Conduct initial sampling	
E.6.	Within 30 days of abandonment	Submit documentation of abandonment	
E.8.a.	Semi-annually	Conduct leachate sampling	
E.8.b.	Annually	Conduct leachate sampling	
E.9.d.	Semi-annually	Conduct surface water monitoring	
E.10.	Semi-annually, by January 15 th and July 15 th each year	Submit water quality monitoring analyses (SC#E.4.c., E.8.a., E.8.b., E.9.d.)	
E.11.	By February 1, 2007 and by August 1, 2009	Submit water quality monitoring plan evaluations	
F.4.	Within 7 days of detection	Submit gas remediation plan	
	Within 60 days of detection	Complete corrective actions	
G.1.	No later than 90 days prior to the date when wastes will no longer be received	Submit Closure Permit application	

Pelz, Susan

From: Sent: To: Cc: Subject: Pelz, Susan Monday, January 24, 2005 10:46 AM Frank Coggins (E-mail); Paul Wingler (E-mail) Morris, John R. Sarasota Central permit

Frank,

I am currently working on your permit. I apologize for the delay in getting it to you. I'll email a draft to you for your comment as soon as I get it done (hopefully end of this week).

Thanks for your patience. Susan J. Pelz, P.E. Solid Waste Program Manager Southwest District 813-744-6100 x 386 susan.pelz@dep.state.fl.us

Tracking:

Recipient

Read

Frank Coggins (E-mail) Paul Wingler (E-mail) Morris, John R.

Read: 1/24/2005 11:04 AM





3012 U.S. Highway 301 M Suite 700 Tampa, FL 33619-2242

SCS ENGINEERS

September 2, 2004 File No. 09201010.01

John Morris, P.G. Florida Department of Environmental Protection Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619-2242

Subject: CCSWDC Landfill - Operation Permit Renewal Pending Permit No.: 130542-002-SO, Sarasota County

Dear Mr. Morris:

On behalf of Sarasota County, SCS Engineers (SCS) submits the enclosed revised Figure L-1 to supplement the information provided to the Department on June 4, 2004. This supplemental information was developed based on our telephone conversation of September 1, 2004 whereby you requested changes to this figure to be consistent with the depiction of monitor wells in Figure 4-1 of Appendix A to the application (Biennial Water Quality Monitoring Report).

If you have any questions about the information provided, please do not hesitate to contact us.

Sincerely, 9-2-04

John A. Banks, F.E. Project Director SCS ENGINEERS

Enclosures cc: Frank Coggins, Sarasota County, w/ enclosures

Ship fron

Raymond J. Dever, P.E., DEE Vice President SCS ENGINEER



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Figure L-1. Site Plan, Central County Solid Waste



Disposal Complex, Sarasota County, Florida.

Environmental Consultants



2004

SCS ENGINEERS

November 18, 2004 File No. 09201001.01

Mr. John R. Morris, P.G. Florida Department of Environmental Protection 3804 Coconut Palm Drive Tampa, Florida 33619

Central County Solid Waste Disposal Complex, Sarasota County Subject: Pending Permit No. 130542-002-SO Southwest District Tampa Replacement Monitoring Well MW-8A

Dear Mr. Morris:

On behalf of Sarasota County, SCS Engineers (SCS) is submitting the attached figure showing the location of monitoring well MW-8A. Monitoring well MW-8A will replace the original monitoring well MW-8 that was recently damaged beyond repair.

Monitoring well MW-8A will be constructed immediately adjacent to the MW-8 location and will have the following approximate construction characteristics:

Approximate Well Construction Elevations (Feet NGVD unless noted)				Water Elev (F NG	r Level ations eet VD) ¹			
Measuring Point Elevation	Top of Casing Above Land Surface (feet)	Ground at Well	Top of Bentonite Seal ²	Top of Sand ³ Pack	Top of Slotted Screen	Bottom of PVC End Cap	Maximum	Minimum
32.0	3.0	29.0	25.0	24.0	23.0	13.0	20.34	17.06

Notes:

¹Values based on 2002 biennial report water level data plus consideration of water level data collected semi-annually at MW-8 during 2002, 2003, and the first half of 2004.

² Annulus will be grouted to surface above bentonite seal.

³ Filter pack will be 20/30 silica sand.

⁴ Casing and screen materials will be schedule 40 PVC and 10-slot screen.

Offices Nationwide

See Band Report

John R. Morris, P.G. November 18, 2004 Page 2

During construction of MW-8A, the damaged well, MW-8, will be abandoned in accordance with Chapter 62-532.440, F.A.C, and the rules of the Southwest Florida Water Management District. A written report will be submitted to the Florida Department of Environmental Protection documenting the abandonment within 30 days of abandonment.

Please contact us if you need further information regarding construction of MW-8A or abandonment of MW-8.

Sincerely,

Robert L. Westly, P.G. Senior Hydrogeologist

John A. Banks, P.E.

Project Director SCS ENGINEERS

RLW/JAB:rw Enclosure

cc: Frank Coggins, Sarasota County Paul Wingler P.E., Sarasota County





Figure L-1. Site Plan, Central County Solid Waste

. •



Disposal Complex, Sarasota County, Florida.



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION 3804 COCONUT PALM DRIVE TAMPA, FL 33619-1352

FAX

11/15/04 Date:

Number of pages including cover sheet: 3

TO: PAUL WINFLOR	FROM:	JOHN MORRIS		
				_ _
PHONE:	PHONE:	(813) 744-6100,	ENT. 336	
FAX #: 941-486-2620	FAX #:	(813) 744-6125		
CC:				_
REMARKS: Urgent / For your review	v Rep	ly ASAP	Please comment	
PAUL				
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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION 3804 COCONUT PALM DRIVE TAMPA, FL 33619-1352



FAX

Date: 10/19/04

Number of pages including cover sheet: 2

TO: DON SHAVLIS	FROM: JOHN MOLLIS	
PHONE:	PHONE: (813) 744-6100, DT- 336	
FAX #: 941-486-2620	FAX #: (813) 744-6125	
CC:		
REMARKS: Urgent For your review	Reply ASAP Please comment	
Don -		
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John







** Transmit Conf.Report **

P.1

Nov 15 2004 13:30

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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION 3804 COCONUT PALM DRIVE TAMPA, FL 33619-1352

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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION 3804 COCONUT PALM DRIVE TAMPA, FL 33619-1352

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PHONE:	PHONE: (813) 744-6100, EXT. 336
FAX #: 941-486-2620	FAX #: (813) 744-6125
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Don -	
HERE'S A COPY OF FIGME L	-1 THAT I RECEIVED
FROM SCS ENGINEERS ON 9/2/04	. THIS WAS THE FIGURE I
WAS FLANNING TO USE TO SHOW	THE MONTON WELLS, REFLACEMENT
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Figure L-1. Site Plan, Central County Solid Waste Disposal Complex, Sarasota County, Florida.



** Transmit Conf.Report **

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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION 3804 COCONUT PALM DRIVE TAMPA, FL 33619-1352

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Number	of pages including cover sheet	2

TO: DON SHAWLIS	FROM: JOHN MOLLIS
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FAX #: 941-486-2620	FAX #: (813) 744-6125
CC:	
REMARKS: Urgent For you	r review Reply ASAP Please comment
Don -	
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WAIVER OF 90 DAY TIME LIMIT UNDER SECTIONS 120,60(2) AND 403.0876, FLORIDA STATUES

License (Permit, Certification) Application No. 1305-42-202-50

Applicant's Name: <u>Sandsota Conty Central SUN Dissosal Complex</u> Class I if Operation Revenue

With regard to the above referenced application, the applicant hereby with full knowledge and understanding of applicant's rights under Sections 120.60(2) and 403.0876, Florida Statues, waives the right to have the application approved or denied by the State of Florida Department of Environmental Protection within the 90 day time period prescribed by law. Said waiver is made freely and voluntarily by the applicant, with full knowledge, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Protection.

09/03/04 FRI 07:14 FAX 941 4962620 SOLID WASTE OPER WHSTE MG1 HMPH SWD ax:813/446125 Sep

This waiver shall expire on the $5^{\frac{7}{12}}$ day of November.

Sep 1

4 13:51

P.02

The undersigned is authorized to make this waiver on behalf of the applicant.

<u>Pa Wingle</u>

Reul A. Wingler P.E. Name (Please Type of Print)

Revised September, 1996

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FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION 3804 COCONUT PALM DRIVE TAMPA, FL 33619-1352

FAX

04 91 Date:

Number of pages including cover sheet: 2

TO: PAI Winglen FROM: Susan Pelz
PHONE: PHONE: (813) 744-6100, X386
FAX #: 941-486-2620 FAX #: (813) 744-6125
CC:
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WAIVER OF 90 DAY TIME LIMIT UNDER SECTIONS 120.60(2) AND 403.0876, FLORIDA STATUES

License (Permit, Certification) Application No. <u>130542-002-50</u> Applicant's Name: <u>SANASOTA County</u>, <u>Central SWDissesal Complex</u> Class I UF operation reveux!

With regard to the above referenced application, the applicant hereby with full knowledge and understanding of applicant's rights under Sections 120.60(2) and 403.0876, Florida Statues, waives the right to have the application approved or denied by the State of Florida Department of Environmental Protection within the 90 day time period prescribed by law. Said waiver is made freely and voluntarily by the applicant, with full knowledge, and without any pressure or coercion by anyone employed by the State of Florida Department of Environmental Protection.

This waiver shall expire on the $5^{\frac{14}{5}}$ day of <u>November</u> $\frac{2\omega\gamma}{2}$.

The undersigned is authorized to make this waiver on behalf of the applicant.

Signature

Name (Please Type or Print)

Revised September, 1996





3012 U.S. Highway 301 N Suite 700 Tampa, FL 33619-2242 813 621-0080 FAX 813 623-6757

SCS ENGINEERS

June 4, 2004 File No. 09201010.01

Susan Pelz, P.E. Florida Department of Environmental Protection Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619-2242

Subject: CCSWDC Landfill - Operation Permit Renewal Pending Permit No.: 130542-002-SO, Sarasota County

Dear Ms Pelz:

On behalf of Sarasota County, SCS Engineers (SCS) submits the enclosed information to supplement our request for information response provided to the Department on March 31, 2004. This supplemental information was developed based on discussions with Mr. Kim Ford. Mr. Ford indicated that if these items could be corrected and resubmitted the application would be declared complete. As a result of our discussions with Mr. Ford a request was made to the Department to suspend the review clock on the March submittal in order to provide these additional items.

Enclosed you will please find four sets of the following items requested by Mr. Ford:

- Revised fill sequencing plans for the referenced facility, which show more than five years of landfilling capacity.
- Operations Plan replacement pages L-6, L-18, L-22, and L-25 which correct minor typographical errors on these pages.
- Revised Figure L-1, which properly shows the LFG monitoring locations GM-4, GM-5, and GM-7 that where previously omitted.

If you have any questions about the information provided, please do not hesitate to contact us.

Sincerely,

John A. Banks, P.E. Project Director SCS ENGINEERS

Enclosures cc: Frank Coggins, Sarasota County, w/ enclosures

Raymond J. Dever, P.E., DEE Vice President SCS ENGINEER



See Band Apat

The yard waste processing facility location is shown on Figure L-1. The facility is permitted under a separate yard waste processing facility registration.

L.2.d Weighing Or Measuring Incoming Wastes

All waste entering the landfill site will be weighed. A minimum of three (3) electronic 50-ton scales are installed at the entrance facility. An Information Management System (IMS) is linked to the scales to facilitate accurate data collection and measurement of incoming materials.

L.2.e Vehicle Traffic Control and Unloading

Directional signs will be placed to safely direct vehicles to the current waste unloading area. These signs will have large legible letters and will be cleaned when necessary. Signs will be strategically placed so that the route is clear to the drivers. Speed limit, safety, and prohibitive practice signs will be placed as necessary to encourage a safe, clean operating area. Unloading will be permitted only at the designated working face. On the fill area, temporary signs, barricades and flagged stakes will be used to direct vehicles to the proper tipping area. Haulers will be responsible for unloading their own vehicles. Wastes requiring special handling will be coordinated with and unloaded under the direct supervision of landfill contract operation personnel.

L.2.f Method And Sequence Of Filling Waste

The overall phasing plan for the facilities is depicted on Sheet 4 of the Operations Drawings included in Attachment L-3. The layout for the Cells (designated disposal units) comprising Phase I of the Class I landfill is shown on Sheet 1. A detailed staging plan for the fill sequencing is provided on Sheets 6 through 13D. The typical height for each lift is 10-15 feet. The temporary roads and swales for access and surface water drainage will be phased in as the Phase I area is filled. The maximum width of the working face will be 200 feet. However, the landfill operations may be conducted with a working face width of less than 200 feet.

Filling in New Cell

Solid waste shall be deposited in each new cell (designated disposal unit) beginning at the south end of the landfill cell. A temporary rain cell cover composed of a reinforced flexible plastic membrane and designed for landfill applications shall be deployed over portions of the landfill cell to collect rainwater separate from the leachate. A portable "trash pump" will be used at the north end (low end) of the cell to pump accumulated rainwater from off the top of the new cell cover to the stormwater system or to the adjacent unused landfill cell.

The first lift will start at the southern end of the cell. The lift will progress to the north across the entire width of the landfill cell. The working face will primarily move in an east/west direction across the width of the landfill cell. Selected solid waste loads consisting of solid

A containment berm will isolate the working face from the remaining covered areas. Stormwater which accumulates behind the containment berm in the area of the working face is leachate and will be retained and allowed to percolate into the landfill where it will eventually be collected in the leachate collection system.

Other berms will divert stormwater from top slopes to let down structures and will serve as erosion control to protect recent covered side slopes. These external berms will be sodded to prevent erosion and will be directly connected to the temporary letdown structures to facilitate proper management of stormwater runoff.

Sediments which reach the perimeter ditch (shown on Sheet 3 of the Operation Drawings, Attachment L-3) will collect behind the ditch blocks and will require periodic removal. Within 30 days after applying intermediate cover to side slopes that have reached designed dimensions, sod shall be applied. As filling progresses above the first terrace, the first set of temporary letdown structures will be constructed as shown on Sheet 6 of 16 of the Operation Drawings. This operating procedure will minimize the amount of erosion and sediment accumulation that must periodically be removed from the perimeter ditches.

.Intermediately covered areas, or other areas that discharge to the stormwater management system, which exhibit significant erosion, will be repaired as follows:

- If greater than 50 percent of the soil cover material has eroded, then the area will be repaired within 7 days.
- If waste or liner is exposed, then the area will be repaired by the end of the next working day.

L.8 PROCEDURE FOR LEACHATE MANAGEMENT

L.8.a Leachate Monitoring, Sampling and Analysis

The sump pumps located in Cells 1 through 5 will operate in an automatic mode based on the liquid level in the sump. Figure L-3 shows the operation levels for the sump pumps. The pressure transducer located at the end of the pump housing accurately measures the level of liquid in the sump and provides a digital readout of this level at the control panel mounted on the valve box at the top of the each cell's lined external containment berm. As shown on Figure L-3, the high water alarm will result if leachate levels rise to cause 12 inches of head on the liner system adjacent to the sump area.

Two additional pump units will be provided for backup. This allows for removal of each pump on a regularly scheduled basis to perform preventative maintenance. When a sump pump is removed for scheduled maintenance, a spare pump will be reinstalled immediately while the maintenance is being performed. Each pump will receive preventive maintenance in accordance with the manufacturer's recommendations at a frequency based on run time. The monitoring will be conducted for the Lower Explosive Limit (LEL) of methane. A Gasman II CEA Instruments or an equivalent unit will be used. No purging of the probe shall be allowed. Once the meter is connected to the sampling port, the valve shall be opened and the meter pump shall be engaged and meter reading observed. The highest value observed is recorded as well as the steady state value observed.

If the LEL is greater than 25 percent inside any monitor location probe, a temporary monitor probe shall be established 50 feet from the monitor location in the opposite direction from the landfill. The temporary monitor probe shall be of the design as shown in Figure L-4. The temporary monitor probe will be monitored on a monthly basis for at least one quarter and until the temporary monitor station records zero percent LEL and the monitor location probe records less than 25 percent LEL. If the LEL is greater than 25 percent inside the structures, or equal to, or greater than 100 percent at any monitor probe, the landfill operator will submit to the FDEP within seven (7) days a remediation plan detailing the nature and extent of the problem and the proposed remedy. The remedy will be completed/ implemented within sixty (60) days of the detection unless otherwise approved by the FDEP.

L.10 STORMWATER MANAGEMENT SYSTEM

The landfill stormwater management system for CCSWDC is discussed in Section L.2.h.(3) - Stormwater System.

L.11 EQUIPMENT AND OPERATION FEATURE REQUIREMENTS

L.11.a Adequate In-Service Equipment

Equipment proposed for the CCSWDC will include the equipment listed in Table L-1. The exact equipment complement may vary from time to time and additional equipment will be acquired if needed. One roll-off container will be placed at the Class I landfill area.

NUMBER	EQUIPMENT
1	Bulldozers
2	Compactors
1	Dump Truck
1	Front-end Loader
1	Graders
1	Hydraulic Excavator
1	Water Truck
1	Fuel Truck
2	Pick-up Truck
2	UD Gators
1	Roll-off Containers

TABLE L-1. EQUIPMENT USED AT THE CCSWDC

Sarasota County CCSWDC Operations Plan Revised June 4, 2004
L.11.f Litter Control Devices

See Section L.7.j. in this Operations Plan.

L.11.g Signs Indicating Name Of Operating Authority, Traffic Flow, Hours Of Operation, And Charges For Disposal

There is a permanent sign at the south property line along the access road to the facility identifying the Sarasota County Central County Solid Waste Disposal Facility and indicating hours of operation and charges for different types of loads. The sign indicates materials that are not accepted for disposal in the landfill. Signs indicating approach and exit routes and one-way roads are strategically placed so traffic at the landfill will move smoothly and efficiently to and from the working face area.

L.12 ALL WEATHER ACCESS ROADS

A paved entrance from Knights Trail Road terminates at the landfill perimeter roadway. In addition, paved perimeter roads around the landfill areas are shown on Figure L-1. All weather access roads will be constructed within the Class I area to route traffic to the active working face. The all weather access roads will be constructed of earth, ground shingles, crushed rock, shell or any other stabilizing material, as appropriate.

L.13 ADDITIONAL RECORD KEEPING AND REPORTING

See Section L.3 of this Operations Plan.

John A. Banks

From: nt: Cc: Subject: John A. Banks Friday, June 04, 2004 9:13 AM Frank Coggins (E-mail) Ray J. Dever CCSWDC Revised Fill Sequence Drawings

This is to confirm our telephone conversation this morning that both the County and Onyx found the new draft fill Sequence plans acceptable and that SCS is to submit them to DEP to finalize the permit application.

1

John A. Banks, P.E. Project Director SCS Engineers Tampa, Florida (813) 621-0080 jbanks@scsengineers.com



Figure L-1. Site Plan, Central County Solid Wast



e Disposal Complex, Sarasota County, Florida.































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Pelz, Susan

From:	Pelz, Susan
Sent:	Tuesday, April 13, 2004 7:30 AM
То:	Ford, Kim
Subject:	RE: Sarasota County Operations Permit Application

Tracking: Recipient Read

Ford, Kim Read: 4/13/2004 8:27 AM

Kim,

Please give me a conversation record or other documentation for the discussion you had with them last week (referenced by John Banks) and a detailed explanation of what changes are still needed on this application.

Susan

----Original Message----From: Ford, Kim
Sent: Monday, April 12, 2004 2:54 PM
To: 'John A. Banks'
Cc: Pelz, Susan; Morris, John R.
Subject: RE: Sarasota County Operations Permit Application

John,

I look forward to the revised documents, and the DEP 30 day review process will begin upon receipt. Thank you.

Kim Ford, P.E. FDEP - Tampa Solid Waste Section (813) 744-6100, 382 kim.ford@dep.state.fl.us

-----Original Message----From: John A. Banks [mailto:jbanks@scsengineers.com]
Sent: Monday, April 12, 2004 2:23 PM
To: Ford, Kim
Cc: Frank Coggins (E-mail); Paul Wingler (E-mail); Ray J. Dever
Subject: Sarasota County Operations Permit Application

Kim, as we discussed last week, Sarasota County desires to revise the fill sequencing plan for the referenced application in order to show at least five years of fill activity for this permit. We understand the time limit you are under to respond to the previous submittal package. Thus the County requests that the clock for the current review be suspended until the revised information is submitted to you.

Please do not hesitate to contact us if you should have any questions regarding this request.

John A. Banks, P.E. Project Director SCS Engineers Tampa, Florida (813) 621-0080 jbanks@scsengineers.com

Pelz, Susan

From: Ford, Kim

Sent: Thursday, April 08, 2004 2:50 PM

To: Pelz, Susan

Subject: conversation with John Banks about Sarasota CCSWDC LF Renewal response

On 4/8/04 J.B. met with me to discuss several items regarding the CCSWDC renewal as follows:

1. I said I would call Francine for a copy of the YT registration package;

2. Figure L-1 must be revised to show all the Gas Monitoring locations;

3. Figure L-6 should use the same .5% for N-S grading as described on the cross-sections;

4. the Operations Plan references sheet 5 that has been deleted from the set of drawings. J.B. will revise so as not to reference sheet 5;

5. the Operations Drawings incorrectly label the swales and benches on sheets 6 -9. J.B. will revise.

6. the Operations Drawings sequences end on December 2008 (less than 5 years) on sheet 11. J.B. will discuss with Frank Coggins to see if more drawings will be included for Cell 5 also, or do a mod. later (if permit issued for less than 5 years) to extend the expiration date.

7. the Operations Drawings cross-sections must show the benches at elevation 77 (sheets 13A, 13B, 13C). J.B. will revise.

J.B. said I can expect revisions by next Friday (April 16).

Kim Ford, P.E. FDEP - Tampa Solid Waste Section (813) 744-6100, 382 kim.ford@dep.state.fl.us





3012 U.S. Highway 301 N Suite 700 Tampa, FL 33619-2242

SCS ENGINEERS

March 31, 2004 File No. 09201010.01

Kim Ford, P.E. Florida Department of Environmental Protection Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619-2242

APR 0 1 2004 Southwest District Tampa

Subject: CCSWDC Landfill - Operation Permit Renewal Pending Permit No.: 130542-002-SO, Sarasota County

Dear Mr. Ford:

On behalf of Sarasota County, SCS Engineers (SCS) submits the following responses to your request for additional information (RAI) in a letter directed to Mr. Gary Bennett from Mr. Kim Ford, dated October 16, 2002. This submittal represents the fourth response to this RAI. Previous responses were provided on May 2, May 28, and October 7, 2003 (submitted via Sarasota County correspondence).

For ease of review, each FDEP comment is reiterated in bold type, followed by our response.

The following documents are provided with this submittal:

- Revised Section L Operations Plan
- Revised Figures L-1 through L-7
- Revised Attachment L-13, Recycling Plan
- Revised Operations Drawings sheets 3, 6 though 13C and 16
- Revised Figure E-2 and F-1 (submitted on May 28, 2003)
- Revised Figure 4-1 (submitted on October 7, 2003)
- Calculations of slope stability for the stormwater berm (submitted on October 7, 2003)
- Overall slope stability calculation for the current 3:1 side slope configuration.
- Most recent topographic survey of the Phase I area (previously provided to the Department)

We have included the revision date as part of the header/footer for all revised pages and provided four copies of all revised materials.

In addition, the County has completed the Application for Yard Waste Processing Facility Registration. The facility registration number is 0171YT. The County provided copies of the application to the Southwest District office.

The following information is needed in support of the solid waste application (Chapter 62-701, Florida Administrative Code (F.A.C.). Please provide:

1. 62-701.500(2) (f) and (7) (c), and 62-701.600 (5) (e). According to Department rules, final sideslopes shall not be steeper than three feet horizontal to one foot vertical to control erosion of the final cover materials. The typical swale detail

(see Band Doc



shown on Sheet 16 of the Operation Drawings shows 2H:1V sideslopes. Revisions to Detail B on Sheet 16 are requested to show 1) the 3H:1V waste limits along the sideslopes and (2) the final cover designed with a 3H:1V maximum sideslope adjacent to the swale.

Response: Please see the revised Detail B on the enclosed Sheet 16 of the Drawings and the enclosed calculations.

62-701.500, .510, and .530. Responses to Mr. John Morris' October 16, 2002 memorandum (attached) are requested. You may call Mr. Morris at (813) 744-6100, extension 336 to discuss the items in his memorandum.

Response: The responses to these comments were provided in the May 2, 2003 response letter from SCS. The responses are repeated here for your convenience.

SECTION B – DISPOSAL FACILITY GENERAL INFORMATION

1. B.13.: The response that indicates the notation of the special exemption area in the County land records was not intended to fulfill landfill closure requirements, and the submittal of revised page 7 of the application form are noted. No additional information is requested.

Response: Comment noted.

<u>SECTION L – LANDFILL OPERATION REQUIREMENTS</u> (Rule 62-701.500, F.A.C.) <u>Operations Plan, Sarasota County, Florida, CCSWDC, prepared by SCS Engineers, dated</u> <u>Feb.28, 2002</u>

- 2. L.2.h.(2) Leachate Management System
 - a. Collection System The submittal of Figure L-1A showing the leachate pump station value boxes labeled C-1 through C-5 is noted. No additional information is requested.

Response: Comment noted.

c. The response verifying that Pond No. 6 is the location that will receive stormwater retained in the secondary containment of the leachate storage tank and the revision to Section L.2.h.2 of the Operations Plan are noted. No additional information is requested.

Response: Comment noted.

5. L.8.b. – Leachate Collection and Removal System: The reference to the response provided to review comment No. 2.a. is noted. No additional information is requested.

Response: Comment noted.

6. L.9. – Gas Monitoring Program

- a. The revision to Section L.9 of the Operations Plan describing how the landfill gas probes will be monitored to be consistent with Rule 62-701.530(2)(b), F.A.C., is noted. However, the Department does not agree with the response that the issue of landfill gas detected at GP-4, GP-5 and GP-6 has been resolved. The proposed changes to the gas probes in the renewal application and subsequent submittals follow:
 - <u>February 2002</u>: abandon existing GP-4/GP-5/GP-6; install proposed GP-4t at a location south of the borrow stockpile and yard waste compost areas
 - June 2002: abandon existing GP-4/GP-5/GP-6; renumber proposed GP-4t as proposed GP-4 and relocate it from south of the borrow stockpile and yard waste compost areas to between the waste tire and C&D processing facilities
 - <u>September 2002</u>: abandon existing GP-4/GP-5/GP-6; renumber proposed GP-4 as proposed GP-7 to be installed at a location between the waste tire and C&D processing facilities

It is agreed that the south side of landfill Cells 1 through 5 is a considerable distance from the property boundary. However, the proposed changes to eliminate the existing gas probes along the south side of the landfill footprint <u>and</u> the ambient monitoring locations in the scale house and administration building do not appear to provide a means to demonstrate the absence of landfill gas in the subsurface or in structures south of the landfill footprint. As such, the proposed changes do not appear to meet the requirements of Rule 62-701.530(2), F.A.C. At a minimum, the landfill gas monitoring program must include at least one gas probe located south of the landfill footprint (existing GP-4/GP-5/GP-6 or proposed GP-4t would be acceptable) <u>or</u> the existing ambient monitoring points at the scale house and administration building must be maintained. Please submit revisions to Section L.9 and Figure L-1 of the Operations Plan as appropriate to address this review comment.

b.

Response: Section L. and Figure L-1 have been revised to include GM-4 and GM-5 in the LFG Monitoring Plan.

It is agreed that the Department did not issue a permit modification to include ambient monitoring locations GM-6 and GM-7 in Specific Condition No. 19 of permit No. SO58-299180. For the purposes of clarification, it is noted that the County agreed to add ambient monitoring location GM-7 (electric panel at leachate tank) to the quarterly landfill gas monitoring events in response to the Department's request during a meeting conducted November 9, 1999. As previously requested, please provide a site map that shows the location of GM-6 (control booth) and specifically indicate why it is considered appropriate to cease monitoring this location. At a minimum, it is considered appropriate to maintain ambient monitoring location GM-7. Please submit revisions to Section L.9 and Figure L-1 of the Operations Plan as appropriate to address this review comment.

Response: Section L.9 and Figure L-1 have been revised to include GM-7. A more detailed site plan is attached to show the location of the control booth. The control booth should not be routinely monitored because it is rarely occupied, its foundation is elevated above natural grade, the local groundwater table is within a few feet of land surface and it is over 3,000 feet from the waste filling area. The control booth is also located immediately adjacent to the Scale House where monitoring will be performed.

c. The response and the revisions to Section L.9 and Figure L-1 of the Operations Plan that indicate the proposed gas probe to be located between the waste tire and C&D processing facilities shall be identified as GP-7 are noted. No additional information is requested.

Response: Comment noted.

- 11. Section 4 Water Quality Monitoring Findings
 - a. The revisions of Appendix A (Ground Water Quality Data) to address the majority of the listed inconsistencies with the data provided by Sarasota County are noted. Several of the items need additional review, as follow:
 - 2) The revisions to the ground water quality data summaries for wells MW-1, MW-9 and MW-10 for the stated parameters/sampling events are noted. No additional information is requested.

Response: Comment noted.

- c. The discussion of trend analysis provided for some of the parameters appears to be inconsistent with the data provided by Sarasota County for the semi-annual sampling events and the plots provided in Appendix B. Please review the results for the following parameters and revise as appropriate:
 - 3) The response that the County will regrade the northwest corner of the yard waste processing area to redirect stormwater toward the east and south is noted. No additional information is requested.

Response: Comment noted.

- d. The revisions of Appendix C (Leachate Quality) to address the majority of the listed inconsistencies with the data provided by Sarasota County are noted. Item No. 4 needs additional review, as follows:
 - 4) The affirmation in the response that the leachate sample collected during the October 2000 sampling event was reported to contain nitrate at 0.03 mg/L is noted. No additional information is requested.

Response: Comment noted.

e. The acknowledgement of the Department's intention to prepare Specific Conditions of the renewal permit to include the proposed parameters in the routine sampling events and to require their inclusion in the next monitoring plan evaluation is noted. No additional information is requested.

Response: Comment noted.

12. Section 5 – Ground Water Levels and Flow

b. Further review of the field sheets included in the reports for the semiannual sampling events indicates that three elevations for the top of casing at well MW-9 (31.90, 34.85 and 35.01 feet NGVD) have been used since 1998. The data available in the Department's files are not sufficient to determine which elevation is correct for which sampling event. To resolve this uncertainty, it is the Department's intention to require a new survey (top of casing/land surface elevations and latitude/longitude coordinates) be submitted for all proposed <u>and</u> existing monitor wells to comply with the requirements of Rule 62-701.510(3)(d)1, F.A.C. This comment is provided for informational purposes, no additional information is requested.

Response: Comment noted.

d. The response that surface water elevations in the retention ponds may be influenced by short-term rainfall events is noted. No additional information is requested.

Response: Comment noted.

- **13.** Section 6 Adequacy of Monitoring Program
 - a. The submittal of Figure 4-1 to show the locations of existing and proposed monitoring and test sites is noted. It is the Department's understanding that wells MW-6 and MW-7 were abandoned and that water levels will be measured in wells MW-3 and MW-5 during routine sampling events (response to comment No. 12.d., dated and received June 28, 2002). Please submit a revised Figure 4-1 that indicates the status of these wells.

Response: Figure 4-1 has been revised as requested. The revised Figure 4-1 is enclosed.

If you have any questions about the information provided, please do not hesitate to contact us.

Sincerely, 3-31-04 John A. Banks, P.E.

Project Director SCS ENGINEERS

Gayn A Lever

Raymond J. Dever, P.E., DEE Vice President SCS ENGINEERS

JAB/RJD:jab Enclosures

cc: Frank Coggins, Sarasota County Susan Pelz, P.E., FDEP Tampa John Morris, P.G., FDEP Tampa

Ġ,

March 30, 2004

File No. 09201010.15

MEMORANDUM

TO: File

FROM: John Banks

Southwest District Tampa 3-31-04

SUBJECT: Slope Stability Analysis for Sarasota County Central Landfill

The input data used in the slope stability model is outlined below;

SURFACE PROFILES

The slope stability analyses for the Central County Landfill (Landfill) were conducted based on the bottom liner configuration as shown on CDM drawing's, dated September 1996, specifically sheet Numbers LFC-56, LFC-57, LFC-58, LFC-59, LFC-60, LFC-61, and LFC-62 and the revised side slope configuration developed by SCS Engineers and submitted for permit modification in 1998. The slope stability modeling was conducted along potential failure planes traversing through the north and south sides of the Landfill. In this direction, the failure planes would run parallel to the bottom slope (i.e. worst case). The lowest elevation of the bottom-liner, based upon the CDM drawings, is Elevation 26 on the north side and Elevation 28 on the south side of the Landfill. The highest final buildout elevation is based upon the SCS drawings is Elevation 120.0. The location for the slope stability sections is contained in Attachment A.

BOTTOM CONTAINMENT SYSTEM

The bottom containment system was modeled as a smooth 60-mil geomembrane and geocomposite layer. The geomembrane and geocomposite layer will generally have the lowest interface shear strength values for the bottom containment system. Test results from a direct shear test (similar stress range, same type of materials, and wet interface conditions) were used to estimate the interface friction shear strength of the geomembrane/geocomposite interface. Using the results from the similar direct shear test, a peak interface friction angle of 10 degrees was used for the model. The results of the direct shear test used to approximate the interface shear strength are included in Attachment B.

FOUNDATION SOILS

Below the bottom containment system, a 12-inch low permeability clay layer was constructed. The soils below the low permeability clay layer are a mixture of poorly graded to fine sands, sandy clays, and clays. A review of the boring logs, specifically boring logs TH-22 and TH-15 completed by Ardaman and Associates, indicates the upper 15 feet of soils have an average SPT

(See Bound Agent) FILE
Memorandum March 30, 2004 Page 2

blow count of approximately 22. The first SPT N-values recorded on the logs are not considered representative of the soils since the upper sand layers would have been disturbed and compacted during construction of the cell. Below 15 feet, all the sand and clays layers are very dense sands and stiff clays with SPT blow counts typically exceeding 50 blows per 5 inches. A review of the original slope stability models conducted by Ardaman, only used one layer, with a very conservative value of zero cohesion and 30 degree friction angle, to represent the foundation soils. The high blow counts of 22 to above 50 indicates very dense sands and stiff clay with typical values shear strengths exceeding 30 degrees. SCS also performed the slope stability analyses in this memo using one subsurface soil layer with a 30 degree friction angle. This will be very conservative considering the high SPT blow counts encountered in the subsurface soils. A boring location map and the boring logs for the soils are contained in Attachment C.

ESTIMATED WASTE UNIT WEIGHTS

The in-place unit weight of the waste material, daily cover soils, and water was estimated assuming a typical waste composition and typical waste moisture contents. The waste composition was taken from the FDEP's publication entitled, "Solid Waste Management in Florida 2000-2001". Initial moisture contents were estimated based upon the type of waste material and typical waste moisture contents. The waste composition matrix for Sarasota County and typical moisture contents are contained in Attachment D.

The dry unit weight (solids) was estimate by removing the initial moisture content from the waste. To estimate the unit weight for the mix of waste, sand, and water in the landfill, the unit weight of the waste material was adjusted by increasing the moisture content of the waste material to 40 percent by weight. Daily cover soils were also adjusted to the maximum moisture content based upon borrow study test results conducted by Ardaman. The individual waste layers are 10 feet high and a 6-inch daily cover layer was estimated between the waste layers. The total height of the waste and daily cover layer was estimated from the maximum buildout elevation of the landfill (minus intermediate cover, closure cap, and drainage sand). All layers were assumed to be saturated. The resultant stress due to the wet waste and saturated cover soils was divided by the total waste thickness to estimate a composite unit weight for the slope stability models. A composite unit weight for the slope stability models. This was rounded up to 70 pcf for the slope stability modeling. The composite unit weight calculations are included in Attachment E.

EQUIPMENT LOADS

A CAT D8R Series II WHA dozer was used for equipment loading. The equipment loading calculations are included in Attachment F.

Memorandum March 30, 2004 Page 3

ESTIMATED WASTE SHEAR STRENGTH PROPERTIES

Typical MSW shear strength values range from 26 to 40 degree with some residual cohesion. This is a broad range of values, so to estimate the actual minimum shear strength properties of the waste material a slope stability model of the landfill, with know conditions (slopes and equipment loading) was used to back calculate or estimate the minimum shear strength of the waste material. The minimum shear strength values estimated would produce a Factor of Safety equal to 1.0 since any lower shear strength values would produce a Factor of Safety lower than 1.0 and stability of the waste would not be maintained. Note: This method of back calculating shear strength values is very conservative since no slippage or slope failures have been recorded at the site thus actual conditions for failure are not modeled. The actual shear strength values are in excess of the values computed. The shear strength value, back calculated, is 34.1 degrees friction with zero cohesion. The slope stability model used to estimate the in-place shear strength of the waste is contained in Attachment G.

SLOPE STABILITY RESULTS

Potential failure planes along the liner system were modeled as a non-circular (block) failure analysis to simulate potential slip failure planes between geosynthetic components of the liner system. Potential failure planes through the waste mass were modeled using a circular failure analysis from outside the toe of slope to the upper surface of the landfill. All circular failure planes passed through the foundation soils and waste material. Results of the slope stability model are included in Attachment H.

BLOCK ANALYSIS (Failure along the geosynthetic layers) Results of the Block Slope Stability Analyses are contained in Attachment H.

1. Random Block Analysis South Side

Without Equipment Load Density of waste = 70 lbs/cubic foot Liner interface friction angle = 10° C=0 psf, Phi=34.1 degrees FS = 1.3

2. Random Block Analysis North Side

Without Equipment Load Density of waste = 70 lbs/cubic foot Liner interface friction angle = 10° C=0 psf, Phi=34.1 degrees FS = 1.3 With Equipment Load (D8R WHA SeriesII) Density of waste = 70 lbs/cubic foot Liner interface friction angle = 10° C=0 psf, Phi=34.1 degrees FS = 1.3

With Equipment Load (D8R WHA SeriesII) Density of waste = 70 lbs/cubic foot Liner interface friction angle = 10° C=0 psf, Phi=34.1 degrees FS = 1.3 Memorandum March 30, 2004 Page 4

CIRCULAR ANALYSIS (Failure through the waste and foundation soils) Results of the Circular Slope Stability Analyses are contained in Attachment I.

3. Circular Analysis South Side

Without Equipment Load Density of waste = 45 lbs/cubic foot Liner interface friction angle = 10° C=0 psf, Phi=34.1 degrees FS = 2.3

4. Circular Analysis North Side

Without Equipment Load Density of waste = 45 lbs/cubic foot Liner interface friction angle = 10° C=0 psf, Phi=34.1 degrees FS = 2.3 With Equipment Load (D8R WHA SeriesII) Density of waste = 45 lbs/cubic foot Liner interface friction angle = 10° C=0 psf, Phi=34.1 degrees FS = 2.2

With Equipment Load (D8R WHA SeriesII) Density of waste = 45 lbs/cubic foot Liner interface friction angle = 10° C=0 psf, Phi=34.1 degrees FS = 2.3

CONCLUSIONS

Based on the above analysis, the current side slope configuration is stable and acceptable. The calculated factors of safety are considered conservative based on the method used to estimate the shear strength of the waste. We have assumed zero cohesion, which is conservative. Recent literature suggests that cohesion in typical MSW as high as 500 lbs/sq ft. In addition the friction angle of 10° is likely conservative since these measurements are always taken in the machine direction and our proposed failure is across the machine direction. It is suspected that the friction angle across the machine direction would be higher because the resistance is perpendicular to the main ribs of the geocomposite; however, no known data exists for this configuration. Therefore based on all of the above the actual F.S. is greater than what has been calculated. Thus the calculated factor of safety of 1.3 is acceptable.

ATTACHMENT A







ATTACHMENT B



SECTION 15010 1.04A 12

Ardaman & Associates, Inc.

Geotechnical, Environmental and Materials Consultants

February 17, 1997 File Number 96-9759

Comanco Environmental Corporation 7911 Professional Place Tampa, Florida 33637

Attention: Mr. T.R. Johnson

Subject: Laboratory Test Results, HDPE/Geonet Composite, DeSoto County Landfill, Arcadia, DeSoto County, Florida

Dear Mr. Johnson:

As requested, Ardaman & Associates, Inc. has performed an interface frictional resistance test between the proposed 60-mil smooth HDPE liner and the proposed geonet/geotextile drainage composite. The test was performed in general accordance to ASTM D-5321 - "Standard Test Method for Determining the Coefficient of Soil and Geosynthetic or Geosynthetic and Geosynthetic Friction by Direct Shear Method." The tests were performed by clamping a 16 inch long by 12 inch wide specimen of the liner to the lower surface of the direct shear apparatus. The liner was oriented in the apparatus such that the dull appearance side was tested with the machine direction in the direction of shear. The geonet/geotextile drainage composite was clamped to the upper portion of the apparatus with its machine direction in the direction of shear. The requested normal stresses of 14, 28, and 42 lb/in² was applied, the interface submerged below water, and after a seating time of 15 minutes, as requested, the interface was sheared at a constant horizontal displacement of 0.1 inches per minute. The test results are plotted in Figure 1. The apparent peak interface friction angle obtained by linear regression of the data constrained for zero adhesion is equivalent to 10°.

We trust that this information is sufficient for your immediate needs. If there are any questions or when we may be of further assistance, please contact the undersigned at (813) 620-3389.

Respectfully, ARDAMAN & ASSOCIATES, INC.

Wayne Pandorf, P.E. Branch Manager Florida Registration No. 30254

WP:It sse#4\93-9759\results.hdp

Nonmal STRESS 14 psi 2016 psf 28 psi 4032 psf 42 psi 6048 psf 6048 pst ANASOTA LOADING 19 EL 120 STRESS = 92 f (70 / F3)

= 6440 psF

1406 Tech Boulevard, Tampa, Florida 33619 Phone (813) 620-3389 FAX (813) 628-4008 Sim. Ican To DESOTO Co.



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	Ardaman & As Consulling Engineers in Foundations, and Motor	sociates, Inc. Sola, Hydrogeology, Nois Testing
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1-9756\FIG-1

ATTACHMENT C



Sounce: AndAMAN & Assoc Boning Logs & REPORT DATED MARCH 10, 1952

PRO CLI BOR COU DAT NAT	PHOLECT satesota county central canon in complex CLIENT Camp Dresser and McKee Inc. BORING LOCATION See site plan BORING TYPE SPT COUNTY Sarasota STATE Florida CASING TYPE 25' DATE STARTED 2-12-90 DATE STARTED 2-12-90 DATE 2-12-90 NATER TABLE: 1st depth 2.2' DATE TABLE: 2nd depth 1:: DATE 1: DATE 2:											
RE		Bor	ehole gr	Pan.	with 3	bags	of p	ortlan	id cem	ent		
Elevation	Nenth (ft)		Blows/ 6 in	V Value	Sample Number	NM (%)	-200 (X)	LL (X)	PI (%)	Dry en (pcf)	Soils Description and Remarks	
	+		1-2-3	5	1					ă	Dark gray silty fine sand with roots (SM)	
		+	3-6-7	(13)	2						Gray fine sand (SP)	
			6-10-11	<u>(55</u>)	3						- Brown fine sand (SP)	
15	4		7-10-8	(18)							- Grav silty fine sand (SM)	
		 -	6-10-12	(22)	4							
			20-15-12	(27)	5							
10	.4	-101	10-10-12	(22)							Gray fine sand (SP)	
	5.4	15	4-10-31	(41)	6							
		-	· · · · · · · · · · · · ·								Brown clayey fine sand with rock fragments (SC)	
		-	•.		 	-						
-	. 39	-20	10-50/5*	50/5	8	4						
		-										
		- 25			<u> </u>	4					Grav clavev fine sand with rock fragments (SC)	
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]			-					- Gray clayey fine sand with rock fragments (SC)	

BORING LOG ARDAMAN & ASSOCIATES, INC.

BORING NO: TH-15 TOTAL DEPTH: 50.5ft. SHEET 2 OF 2

PROJECT Sarasota County Central Landfill Complex	FILE NO. 89-135
CLIENT Camp Oresser and McKee Inc.	ELEVATION 20.4'HSL
BORING LOCATION See site plan	BORING TYPE SPT

	_	Standar	d Pen. 1 D-156	Test 6	Lab Data			8			=		
Elevation	Depth (ft	Blows/ 6 in	N Value	Sample Number	NM (%)	-200 (X)	LL (X)	PI (%)	Dry Den (pcf)	Soils Description and Remarks	Shallow Ne.	Depth (ft)	Deep Well
	-			13		-				-		-	
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24		24 45 50	05			· · .							
	<u>/</u>	- 21-43-30		14						 Gray clayey fine sand with rock fragments (SC) 			
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-29.	5 50	46-35-25	60	15		 		ļ				<u> </u>	<u> </u>
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PROJ	ECT S	arasota Co np Dresser	unty (AHU Central AcKee I	AMA Land	AN (omple:	<u>55(</u>		FILE NO. B9-135 ELEVATION 20.4'MSL B00THD TVDE SPI		
BORI COUN DATE NATE NATE	NG LO Ity <u>Sa</u> Star R tar R tar R tar	CATION Se rasota TED 2-19- LE: 1st (LE: 2nd (orebole of	90 Jepth Jepth	2.3' 2.8' with 3	3 bags	s of Pr	STAT COMP DATE DATE	E <u>Flo</u> LETEL 2-19 2-20 d cem	rida) <u>2-20-</u> -90 -90 ent	BORING TYPE <u>JF</u> CASING TYPE <u>30 ft</u> . <u>90</u> DRILLER/RIG <u>S.Fisher/CWE-55</u> TIME TIME		
Jevation	epth (ft)	Standard ASTW /SHOL 9	Pen. D-1586 an[eA	tumber	NM (%)	Le -200 (X)	LL (X)	8 PI (%)	Dry n (pcf)	Soils Description and Remarks	allow Well	121
	-	3-2-2 3-5-7	2 4 (12)	1 2 3					Der	Dark gray slightly silty fine sand with roots (SP-SM) Gray fine sand (SP) Brown fine sand (SP)	55	-1
15.4	- 5	6-7-3 7-12-15 12-15-16	10 (27) (31)									
10.4	1 10	13-15-14	(29 (21)	4						- Gray silty fine sand (SM) -		
5.	4 15	- 5 8-6-12	18)	5						- - - Very light brown clayey fine sand with rock fragments		
		-								-		
.3	9 2	0 27-50/5*	50/5	6						- Gray clayey fine sand with rock fragments (SC) 		
-4.	<u>6 2</u>	52-27-50/3	3" 77/9"	7						- - Lost circulation - Gray clayey fine sand with rock fragments (SC) -		
-9	.6 3	- 10 27-50/5*	50/5	8								
-14	.6	35 50/5*	50/5	• 9						Gray silty fine sand with rock (SM)		
										Looser material		

BORING LOG ARDAMAN & ASSOCIATES, INC.

BORING NO: TH-22 TOTAL DEPTH 50.0ft. SHEET 2 OF 2

PROJECT	Sarasota	County	<u>Central</u>	Landfill	Complex

CLIENT <u>Camp Dresser and McKee Inc.</u> BORING LOCATION See site plan

FILE NO. 89-135 ELEVATION 20.4'MSL BORING TYPE SPT

	·····	Standan	Standard Pen. Test						I			T	<u> </u>	
Elevation	Depth (ft)	Blows/ 6 in	N Value	Sample Number	NM (%)	-200 (X)	LL (%)	PI (%)	Dry Den (pcf)	Soils Description and Remarks	Shallow Well	Depth (ft)	Deep Well	
										Light gray clayey fine sand (SC)		-		
-24.6	- ; 45	50/6"	50/6*	11						- - - Gray silty fine sand with rock (SM) -				
-29.0	- - 5 50	50/3"	50/3	12						- Rock with silty fine sand (SM)				
	-									End of boring 50.0'				
-34.	<i>6</i> 55													
-39.	<u>6</u> 60													
-44	. <u>6 6</u>	-												
-49	9.6 7	- - -											-	
-54	1.6	- - 75								- - -			- - -	
-5	9.6	- - - 80												

13.5 Correlations for Standard Penetration Test

Table 13.3Approximate RelationBetween Corrected StandardPenetration Number, Angle of Friction,and Relative Density of Sand

Corrected standard	Relative	Angle of
penetration number, N	density, D _r (%)	friction, ϕ (degrees)
0-5	0–5	26-30
5-10	5-30	28-35
10-30	30-60	35-42
30-50	60-95	38-46

Sounce: B. DAS 541 "Priveiple of Geotech. Engineening" 1985 Blow COUNTS DENSITY (DR) Blow COUNTS DENSITY RELATIVE SANDS

The standard penetration number is a very useful guideline in soil exploration and assessment of subsoil conditions, provided that the results are interpreted correctly. Note that all equations and correlations relating to the standard penetration numbers are approximate. Since soil is not homogeneous, a wide variation in the N-value may be obtained in the field. In soil deposits



Figure 13.11 Variation of N'/N_F with vertical effective stress, σ' (after Peck, Hanson, and Thornburn, 1974)

ATTACHMENT D

Estimated Waste Properties Moisture Content Moisture Content & Waste Density Central Landfill Sarasota, Florida

	% Total	Wet	% Moisture	Dry	Ref. Waste
		(tons)	(See Note 2)	(tons)	(See Note 2)
Metals	20	75,537.1	3.0	73,337.0	Other Metal
Plastic	5	18,884.3	2.0	18,514.0	Plastic
Other Paper	22	83,090.8	5.0	79,134.1	Carboard
Misc	4	15,107.4	25.0	12,085.9	
Newspaper	3	11,330.6	6.0	10,689.2	Paper
Glass	4	15,107.4	2.0	14,811.2	Glass
Yard Trash	0			0.0	
Tires	· 0			0.0	
C&D .	16	60,429.7	15.0	52,547.6	Rubbish
Food Waste	3	11,330.6	70.0	6,665.0	Food Waste
Textile	3	11,330.6	10.0	10,300.5	Textile
	80	302,148.5		278,084.6	
Total Tana	555 420 O	tone	Londfill	60.00/	One Ninte d
Londfill	277 695 6	tons	Bounded	00.0%	See Note 1
Lanunii	3//,000.0	tons	Recycled	32.0%	
Recycled	177,734.4	lons			

Percent Mc	isture	Waste Density	
Wet	302,148.5 Tons	Wet	50.00 pcf
Dry	278,084.6 Tons	Moisture	7.96 %
Moisture	7.96 %	Dry	46.31 pcf

Note 1) Source: Waste Composition - FDEP "Solid Waste Management in Florida 2000-2001" 2) Source: Waste Moisture Contents - "Intergrated Solid Waste Management" 1993 ed Chapter 4 ISBN 0-07-063237-5 3) Yard waste material/Tire in Waste Composition not landfilled

-

Sarasota County (Jan. 1, 2000 - Dec. 31, 2000)

1. Population ¹	3	25,957
2. MSW Management (tons) ²		
A. Landfilled	3	78,138
B Combusted		0
C. Recycled	1	77,282
D. Total	·	55.420
E. Total Pounds per Capita Per Day ¹		9.34
3. MSW Collected & Recycled		
A. Minimum Five Wastes ³	Collected	Recycled
	(tons)	(%)
1. Newspaper	28,816	95
2. Glass	27,770	60
3. Aluminum Cans	2,704	36
4. Plastic Bottles	6,804	28
5. Steel Cans	4,400	35
B. Special Wastes ⁵	Collected	Recycled
B. option for the second se	(tons)	(%)
4 CRD Dobrin	106 964	1
1. Cab Deblis	77 806	97
2. Faru Irasii	1 274	100
3. White Goods	1,214	08
4. Thes 5. Process Fuel	400	0
C. Other Wastes	298,427	17
D. Total Recycling Rate(%)		32
E. Adjusted Recycling Rate (%) 5.6		32
F. Waste Reduction Per Capita (%) (A negative number indicates an increase in t	he MSW disposal	rate per capita.)
1. Base Year: July 1988-June 1989		31
2. Base Year; July 1989-June 1990		33
3. Base Year: July 1990-June 1991		25
4. Base Year: July 1991-June 1992		5
5. Base Year: July 1992-June 1993		-30
6. Base Year: July 1993-June 1994		-52
G. Participation in Recycling ⁷	Units	Percenf
1. Single-family Curbside	118,830	112
2. Multi-family Curbside ⁹	68,541	128
3. Commercial ¹⁰	22,000	
a) Scheduled collection		287
b) On call collection		76
· ·		







¹ Official 2000 Governor's Office estimate.

² From 2001 - 2002 Recycling and Education grant applications.

³ The Legislature established a goal of 50 percent for each material by the end of 1994.

⁴ Some materials have been combined: Metals include Aluminum Cans, Steel Cans, Ferrous and Non-ferrous metals, and White Goods;

Other Paper includes Corrugated, Office and Other Paper; and Plastics include Plastic Bottles and Other Plastics.

⁵ The total of Special Wastes can count towards no more than one half of the recycling goal for each county.

⁶ The legislature established a goal of 30 percent by the end of 1994 for all counties with a population of over 75,000.

⁷ Participation means availability and usage of recycling services (As of June 1999).

⁸ Percentage of total county units (single/multi-family dwellings and commercial establishments) participating in recycling.

⁹ Includes apartments, condominiums and others.

¹⁰ May also include government and institutional.

* Calendar year data.

INTEGRATED SOLID WASTE MANAGEMENT Engineering Principles and Management Issues

1993 Edinon

George Tchobanoglous

Professor of Civil and Environmental Engineering University of California, Davis

Hilary Theisen

Vice President Brown & Caldwell, Consulting Engineers

Samuel Vigil

Professor of Civil and Environmental Engineering California Polytechnic State University San Luis Obispo, California

McGraw-Hill, Inc.

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70 PHYSICAL, CHEMICAL, AND BIOLOGICAL PROPERTIES OF MUNICIPAL SOLID WASTE

referred to in the solid waste literature incorrectly as density. In U.S. customary units density is expressed correctly as slug/ft³.) Because the specific weight of MSW is often reported as loose, as found in containers, uncompacted, compacted, and the like, the basis used for the reported values should always be noted. Specific weight data are often needed to assess the total mass and volume of waste that must be managed. Unfortunately, there is little or no uniformity in the way solid waste specific weights have been reported in the literature. Frequently, no distinction has been made between uncompacted or compacted specific weights. Typical specific weights for various wastes as found in containers, compacted, or uncompacted are reported in Table 4-1.

TABLE 4-1

Typical specific weight and moisture content data for residential, commercial, industrial, and agricultural wastes

	icultural wast	es	esidential,	
	Specific weigh	nt, Ib/yd³	Moisture c % by we	ontent, right
lype of waste	Range	Typical	Range	Typical
lesidential (uncompacted)				
Food wastes (mixed)	220-810	490	50-80	70 🗸
Paper	70-220	150	4-10	6 V
Cardboard	70-135	85	4-8	5
Plastics	70-220	110	1-4	10.2
Textiles	70-170	110	6-15	10. •
Rubber	170-340	220	1-4	2
Leather	170-440	270	8-12	10
Yard wastes	100380	170	30-80	00
Wood	220-540	400	15-40	20
Glass	270-810	330	1-4	2
Tin cans	85-270	150	2-4	3.
Aluminum	110-405	270	2-4	2
Other metals	220-1940	540	2-4	- J -
Dirt, ashes, etc.	540-1685	1055	6 10	- 0 -
Ashes	1095-1400	1200	5-12 5-00	15 -
Rubbish	150-305	220	0- 20	19.1
Residential yard wastes				
Leaves (loose and dry)	50-250	100	20-40	30
Green grass (loose and moist)	350500	400	. 40-80	60
Green grass (wet and compacted)	10001400	1000	50-90	80
Yard waste (shredded)	450-600	500	20-70	50
Yard waste (composted)	450-650	550	40-60	50
Municipal				
In compactor truck	300-760	500	15-40	20
in landfill			\frown	
Normally compacted	610-840	760	(15-40)	25
Well compacted	995-1250	1010	(15-40)	25
Commercial				
Food wastes (wet)	800-1600	910	5080	70
Appliances	250-340	305	0.0	

(continued)

ATTACHMENT E

Estimated Composite Waste & Soil & Water Weight Central Landfill Sarasota, Florida

Closure Cap Intermed waste daily waste daily waste daily waste daily waste daily waste daily waste	Height (ft) 	Dry (pcf) 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1	Moisture (%) 40.0 16.5 40.0 16.5 40.0 16.5 40.0 16.5 40.0 16.5	Total (pcf) 	Stress (psf) 518.7 57.7 648.4 57.7 648.4 57.7 648.4 57.7 648.4		Height (ft) 2.0 1.5	Dry (pcf) 99.1 99.1	Moisture (%) 16.5 16.5	Total (pcf) 115.5 115.5	Stress (psf) 230.9 173.2	
Closure Cap Intermed waste daily waste daily waste daily waste daily waste daily waste daily waste daily waste	(ft) 	(pcf) 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3	(%) 	(pcf) 64.8 115.5 64.8 115.5 64.8 115.5 64.8 115.5 64.8	(psf) 518.7 57.7 648.4 57.7 648.4 57.7 648.4 57.7 648.4 57.7		(ft) 2.0 	(pcf) 99.1 99.1	(%) 16.5 16.5	(pcf) 115.5 115.5	(psf) 230.9 173.2	· · · · · · · · · · · · · · · · · · ·
Closure Cap Intermed waste daily waste daily waste daily waste daily waste daily waste daily waste daily waste		 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3			 518.7 57.7 648.4 57.7 648.4 57.7 648.4 57.7 648.4 57.7	-	2.0	99.1 99.1	16.5 16.5	<u>115.5</u> 115.5	230.9 173.2	
Intermed waste daily waste daily waste daily waste daily waste daily waste daily waste	- 8.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5	 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3	 40.0 16.5 40.0 16.5 40.0 16.5 40.0 16.5 40.0 16.5	 64.8 115.5 64.8 115.5 64.8 115.5 64.8 115.5 64.8	 518.7 57.7 648.4 57.7 648.4 57.7 648.4 57.7		1.5	99.1	16.5	115.5	173.2	
waste daily waste daily waste daily waste daily waste daily waste daily waste daily	8.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5	46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3	40.0 16.5 40.0 16.5 40.0 16.5 40.0 16.5 40.0 16.5 40.0 16.5	64.8 115.5 64.8 115.5 64.8 115.5 64.8 115.5 64.8 115.5 64.8	518.7 57.7 648.4 57.7 648.4 57.7 648.4 57.7 648.4 57.7							
daily waste daily waste daily waste daily waste daily waste daily waste	0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5	99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3	16.5 40.0 16.5 40.0 16.5 40.0 16.5 40.0 16.5	115.5 64.8 115.5 64.8 115.5 64.8 115.5 64.8 115.5 64.8	57.7 648.4 57.7 648.4 57.7 648.4 57.7 648.4 57.7							
waste daily waste daily waste daily waste daily waste daily waste	10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5	46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3	40.0 16.5 40.0 16.5 40.0 16.5 40.0 16.5	64.8 115.5 64.8 115.5 64.8 115.5 64.8	648.4 57.7 648.4 57.7 648.4 57.7	· · · · · · · · · · · · · · · · · · ·						
daily waste daily waste daily waste daily waste daily waste	0.5 10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5	99.1 46.3 99.1 46.3 99.1 46.3 99.1 46.3	16.5 40.0 16.5 40.0 16.5 40.0 16.5	115.5 64.8 115.5 64.8 115.5 64.8	57.7 648.4 57.7 648.4 57.7							
waste daily waste daily waste daily waste daily waste	10.0 0.5 10.0 0.5 10.0 0.5 10.0 0.5	46.3 99.1 46.3 99.1 46.3 99.1 46.3	40.0 16.5 40.0 16.5 40.0 16.5	64.8 115.5 64.8 115.5 64.8	648.4 57.7 648.4 57.7							
daily waste daily waste daily waste daily waste	0.5 10.0 0.5 10.0 0.5 10.0 0.5	99.1 46.3 99.1 46.3 99.1 46.3	16.5 40.0 16.5 40.0 16.5	115.5 64.8 115.5 64.8	57.7 648.4 57.7				1	1		
waste daily waste daily waste daily waste	10.0 0.5 10.0 0.5 10.0 0.5	46.3 99.1 46.3 99.1 46.3	40.0 16.5 40.0 16.5	64.8 115.5 64.8	648.4 57.7		1 1					
daily waste daily waste daily waste	0.5 10.0 0.5 10.0 0.5	99.1 46.3 99.1 46.3	16.5 40.0 16.5	115.5 64.8	57.7							
waste daily waste daily waste	10.0 0.5 10.0 0.5	46.3 99.1 46.3	40.0 16.5	64.8								
daily waste daily waste	0.5 10.0 0.5	99.1 46.3	16.5		648.4						· ·	
waste daily waste	10.0 0.5	46.3		115.5	57.7							
daily	0.5		40.0	64.8	648.4							
waste		99.1	10.5	109.5	54.8					· · · · · · · · · · · · · · · · · · ·		·
	10.0	46.3	40.0	64.8	648.4							
daily	0.5	99.1	10.5	109.5	54.8							
waste	10.0	46.3	40.0	64.8	648.4							
daily	0.5	99.1	10.5	109.5	54.8							
waste	10.0	46.3	40.0) 64.8	648.4							
Drain Sand		- ·		- 1			2.0	99.1	10.5	109.5	219.0	
Total Height	92.0 5.5 97.5	ft (Daily+w ft (Cap,Inte ft (Bottom	aste) Mor ermed,Sand) to Final Cap)	570 40/0 STURE	Total Stress	6158.7 623.1 6781.8	/ psf (Daily+was psf (Cap, Inter psf (Bottom to	ste) med,Sand) Final Cap)				
Soil			Initial Maete				Composite	Unit We	aht			
	00.4		De Maist		ef		Daily Cover	r ± Warte	- Moietu	ro		16/ -
Dry weight	99.1	per		40.3	pci		Daily Cove	• • • • • • • • • • • • • • • • • • • •	· moistu		1 An	115
Moisture Total Weight	15.5	≫ pcf	Total Weight	7.96 t 50.00	% pcf		Total Stress Height Comp. Weigh	6158.7 92.0 t 66.9	psf ft lb/ft ⁻³	7 02	sn 70	٢IJ
	Friom	And	MAN \$	Assoc	ATC					TH	15 15	AV
4	BONNON	Pit	Rapo	NT						His (ve	h uning we	т ыя ст)

TABLE 7

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Summary Of Laboratory Hydraulic Conductivity Testing Of Remolded Borrow Material Samples

COMPOSITE	TEST HOLE/ SAMPLE NUMBER (DEPTH IN FEET)	FINES CONTENT (%)	INITIAL MOISTURE CONTENT (%)	FINAL MOISTURE CONTENT (%)	NITTAL YD3 (Ib/ft)	FINAL YD3 (Ib/ft ³)	DEGREE OF SATURATION (%)	Vertical Laboratory Hydraulic Conductivity (cm/sec)	VOID RATIO (e)
							Ş	1 25 × 10 ⁻⁸	0.50
•	TH-A.1/RS#1 (9.5-11.5)	33	9.6	19.1	122.6	112.0	201		
-	TH-A-1/BS#2 (11.5-15.5)		11 8	17.0	120.7	119.6	113	1.12 × 10 ⁻⁹	0.41
		Dt	2.1			(4.00 - 40.4	0.41
		15	6.9	15.5	116.1	117.3	10	01 X 00.1	1.1.2
0	TH-A-5/BS#1 (4.0~14.0) TH-A-6/BS#1 (11.5~18.75)	2			110.0	1137	102	4.00 × 10 ⁻⁴	0.45
		14	13.3	ET	1011			8	90 0
		75	30.4	25.8	90.5	100.4	94.4	9.20 × 10 ⁻	00.0
	TH 52/06 #1 (11 0-14 0)	2					9.00	a 30 × 10 ⁻⁸	0.71
'n	(ort or	76	24.6	23.8	98.5	101.8	. 0.55		
					- / -				

~ ANG ~ 11515 pct Aug=16.5%

ATTACHMENT F

)8R Series II WHA - Track-Type Tractors

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EQUIPMENT

HOME

Track-Type Tractors

Choose a Different Product Family

D8R Series II WHA

Back to Track-Type Tractors

The Cat Track-Type Tractor waste handling arrangement machines are purpose built for landfill operations. Special guarding and cooling systems are standard on these machines to help them withstand the harsh operating conditions in the landfill.

Features & Benefits

Other Models: D8R Series II WHA

ENGINES

CAT MERCHANDISE

Printer Friendly



Related Industries:

Waste

Detailed Specifications

Engine

Engine Model Gross Power Flywheel Power RPM Number of Cylinders Bore Stroke Displacement Weights **Operating Weight** Blade

Cat 3406E 252 kW / 338 hp 231 kW / 310 hp 2000 RPM / 2000 RPM 6 137 mm / 5.4 in 165 mm / 6.5 in 14.6 L / 893 in3

37630 kg / 82880 lb 📹

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- Incident Reporting
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http://cmms.cat.com/cmms/servlet/cat.dcs.cmms.servlet.GetModelSummary?classid=406&langid=en&rgni... 1/31/200

D8R Series II WHA - Track-Type Tractors

Blade Type SU-Blade Width U-Blade Width SU LGP-Blade Capacity with Trash Rack SU-Blade Capacity with Trash Rack U-Blade Capacity with Trash Rack

Undercarriage

Track Rollers/Side Track Width - Std. Ground Contact Area w/ Std. Shoe Track Gauge Length of Track on Ground **Dimensions** Height (Stripped Top) Height ROPS/Canopy Overall Length with Blade Overall Length w/o Blade

Width (over Trunnions) Width (w/o Trunnions - Std. Shoe) Ground Clearance **Fuel Tank**

Fuel lank

Fuel Tank Capacity

SU, U 3.94 m / 12.9 ft 4.26 m / 14 ft

21.1 m3 / 27.6 yd3 19.9 m3 / 26.1 yd3 24.8 m3 / 32.4 yd3

8

560 mm / 1.83 ft 3.58 m2 / 5544 in2 2080 mm / 81.89 in 3.21 mm / 10.5 ft

2.67 m / 8.75 ft 3510 mm / 11.5 ft 6.398 m / 20.75 ft 4.55 m / 14.9 ft 3.05 m / 10 ft 2.7 m / 8.67 ft 528 mm / 21 in

Back to Top

625 L / 165 gal

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ATTACHMENT G



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** PCSTABL5M ** by Purdue University --Slope Stability Analysis-Simplified Janbu, Simplified Bishop or Spencer`s Method of Slices

Run Date:	3/26/2004
Time of Run:	1:46PM
Run By:	JHO
Input Data Filename:	F:fin_s_ex.
Output Filename:	F:fin_s_ex.OUT
Unit:	ENGLISH
Plotted Output Filename:	F:fin_s_ex.PLT

PROBLEM DESCRIPTION Central Landfill - Final Buildout Sarasota County, Florida

BOUNDARY COORDINATES

13 Top Boundaries 33 Total Boundaries

Boundary	X-Left	Y-Left	X-Right	Y-Right	Soil Type
No.	(ft)	(ft)	(ft)	(ft)	Below Bnd
1	.00	220.00	198.33	220.00	1 .
2	198.33	220.00	237.33	233.00	1
3	237.33	233.00	267.33	233.00	1
4	267.33	233.00	277.33	231.00	1
5	277.33	231.00	287.33	233.00	· 1 · · ·
6	287.33	233.00	300.00	233.00	2
7	300.00	233.00	400.00	258.00	2
8	400.00	258.00	440.00	260.00	2
9	440.00	260.00	493.00	262.00	2
10	493.00	262.00	545.00	275.00	a 2 m
11	545.00	275.00	560.00	275.00	2
12	560.00	275.00	640.00	295.00	2
13	640.00	295.00	800.00	295.00	2
14	301.82	231.50	400.29	256.01	3
15	400.29	256.01	440.00	258.00	3
16	440.00	258.00	493.28	260.00	3
17	493.28	260.00	545.25	273.00	3
18	545.25	273.00	560.25	273.00	. 3
19	560.25	273.00	640.25	293.00	3
20	640.25	293.00	800.00	293.00	3
21	287.33	231.50	288.33	231.50	1
22	288.33	231.50	301.83	231.50	4
23	301.83	231.50	302.11	231.07	4
24	302.11	231.07	312.37	228.50	4
25	312.37	228.50	800.00	227.29	4
26	288.33	231.50	288.66	231.00	1
27	288.66	231.00	300.32	231.00	5
28	300.32	231.00	312.33	228.00	5
29	312.33	228.00	800.00	226.79	5
30	288.66	231.00	289.32	230.00	1
31	289.32	230.00	300.20	230.00	1
32	300.20	230.00	312.20	227.00	1
23	312 20	227.00	800.00	225.79	1

ISOTROPIC SOIL PARAMETERS

5 Type(s) of Soil

Soil	Total	Saturated	Cohesion	Friction	Pore	Pressure	Piez.
Type	Unit Wt.	. Unit Wt.	Intercept	Angle	Pressure	Constant	Surface
No.	(pcf)	(pcf)	(psf)	(deg)	Param.	(psf)	No.

1	105.0	130.0	.0	30.0	.00	.0	1 - SUBGRAUE
2	105.0	120.0	.0	30.0	.00	.0	1 - COVER
3	70.0	70.0	.0	34.1	.00	.0	1-WASTE
4	62.4	62.4	.0	10.0	.00	.0	1 - GEOMEMBLANE
5	90.0	100.0	.0	20.0	.00	.0	1-5033452

1 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED Unit Weight of Water = 62.40

Piezometric	Surface No.	1 Specified by	2 Coordinate Points
Point	X-Water	Y-Water	
No.	(ft)	(ft)	
1	.00	220.00	
2	800.00	220.00	

BOUNDARY LOAD (S)

1 Load(s) Specified

Load	X-Left	X-Right	Intensity	Deflection
No.	(ft)	(ft)	(psf)	(deg)
1	400.00	410.50	2152.8	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

1000 Trial Surfaces Have Been Generated.

3 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 10.0

Box	X-Left	Y-Left	X-Right	Y-Right	Height
No.	(ft)	(ft)	(ft)	(ft)	(ft)
1	302.84	230.63	311.80	228.40	.25
2	312.00	228.30	313.00	228.50	.25
3	375.15	228.10	400.00	227.95	.25

The Following is the Most Critical Of The Trial Failure Surfaces Examined.

Safety Factors Are Calculated By The Modified Janbu Method

Failure Surface Specified By 8 Coordinate Points

Point	X-Surf	Y-Surf
No.	(ft)	(ft)
1	296.46	233.00
2	305.25	229.99
3	312.77	228.40
4	399.68	227.93
5	404.01	236.94
6	408.02	246.11
7	411.31	255.55
8	414.41	258.72

FACTOR OF SAFETY = 1.0 (With Equipment Loads - This model is ONLY used to estimate the shear strength of the waste materials. Waste shear strength probably exceed the values in this model since no actual failure and loading condition has been documented at the site.)

ATTACHMENT H



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Central Landfill - Final Buildout Sarasota County, Florida

** PCSTABL5M **

by Purdue University --Slope Stability Analysis--Simplified Janbu, Simplified Bishop or Spencer`s Method of Slices

3/26/2004
4:03PM
JHO
F:final_s.
F:final_s.OUT
ENGLISH
F:final_s.PLT

PROBLEM DESCRIPTION Central Landfill - Final Buildout Sarasota County, Florida

BOUNDARY COORDINATES

13 Top Boundaries

40 Total Boundaries

Boundary	X-Left	Y-Left	X-Right	Y-Right	Soil Type
No.	(ft)	(ft)	(ft)	(ft)	Below Bnd
1	.00	220.00	198.33	220.00	1
2	198.33	220.00	237.33	233.00	1
3	237.33	233.00	267.33	233.00	1
4	267.33	233.00	277.33	231.00	1
5	277.33	231.00	287.33	233.00	1
6	287.33	233.00	300.00	233.00	2
7	300.00	233.00	432.00	277.00	2
8	432.00	277.00	452.00	277.00	2
9	452.00	277.00	551.00	310.00	2
10	551.00	310.00	571.00	310.00	2
11	571.00	310.00	587.20	315.40	2
12	587.20	315.40	1507.20	320.00	2
13	1507.20	320.00	1600.00	320.00	2
14	301.82	231.50	432.33	275.00	3
15	432.33	275.00	452.33	275.00	3
16	452.33	275.00	551.33	308.00	3
17	551.33	308.00	571.33	308.00	3
18	571.33	308.00	587.53	313.40	3
19	587.53	313.40	1507.20	318.00	3
20	1507.20	318.00	1600.00	318.00	3
21	302.11	231.07	432.41	274.50	4
22	432.41	274.50	452.41	274.50	4
23	452.41	274.50	551.41	307.50	4
24	551.41	307.50	557.41	307.50	4
25	571.41	307.50	587.61	312.90	4
26	587.61	312.90	1507.20	317.50	4
27	1507.20	317.50	1600.00	317.50	4
28	287.33	231.50	288.33	231.50	1
29	288.33	231.50	301.83	231.50	5
30	301.83	231.50	302.11	231.07	5
31	302.11	231.07	312.37	228.50	5
32	312.37	228.50	1600.00	225.30	5
33	288.33	231.50	288.66	231.00	1
34	288.66	231.00	300.32	231.00	6
35	300.32	231.00	312.33	228.00	6
36	312.33	228.00	1600.00	224.80	6
37	288.66	231.00	289.32	230.00	1
38	289.32	230.00	300.20	230.00	1
39	300.20	230.00	312.20	227.00	1
40	312.20	227.00	1600.00	223.80	1

ISOTROPIC SOIL PARAMETERS 6 Type(s) of Soil

Soil	Total	Saturated	Cohesion	Friction	Pore	Pressure	Piez.
Туре	Unit Wt.	Unit Wt.	Intercept	Angle	Pressure	Constant	Surface
No.	(pcf)	(pcf)	(psf)	(deg)	Param.	(psf)	No.
1	105.0	130.0	. 0	30.0	.00	. 0	1
2	105.0	120.0	.0	30.0	.00	. 0	1
3	62.4	62.4	.0	20.0	.00	.0	1
4	70.0	70.0	.0	34.1	.00	. 0	1
5	62.4	62.4	. 0	10.0	.00	. 0	1
6	90.0	100.0	.0	20.0	.00	.0	1

1 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED Unit Weight of Water = 62.40

Piezometric	Surface No.	1 Specified by	2 Coordinate Points
Point	X-Water	Y-Water	
No.	(ft)	(ft)	
1	.00	220.00	
2	1600.00	220.00	

BOUNDARY LOAD(S)

1 Load(s) Specified

Load	X-Left	X-Right	Intensity	Defl	ection
No.	(ft)	(ft)	(psf)	(deg)	
1	587.20	597.70	2152.8		.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

5000 Trial Surfaces Have Been Generated.

100 Surfaces Initiate From Each Of 50 Points Equally Spaced Along The Ground Surface Between X = 200.00 ft. and X = 300.00 ft.

Each Surface Terminates Between X = 551.00 ft. and X = 700.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 ft.

10.00 ft. Line Segments Define Each Trial Failure Surface.

The Following is the Most Critical Of The Trial Failure Surfaces Examined.

Safety Factors Are Calculated By The Modified Bishop Method

Failure Surface Specified By 35 Coordinate Points Point X-Surf Y-Surf

No.	(ft)	(ft)
1	287.76	233.00
2	297.63	231.39
3	307.53	230.04
4	317.47	228.95
5	327.44	228.13

6	337.42	227.56
7	347.42	227.26
8	357.42	227.22
9	367.42	227.45
10	377.41	227.93
11	387.38	228.68
12	397.33	229.69
13	407.24	230.96
14	417.13	232.49
15	426.96	234.29
16	436.75	236.34
17	446.48	238.64
18	456.15	241.20
19	465.75	244.02
20	475.26	247.08
21	484.70	250.39
22	494.04	253.96
23	503.29	257.76
24	512.44	261.81
25	521.47	266.09
26	530.39	270.62
27	539.19	275.37
28	547.86	280.36
29	556.39	285.57
30	564.79	291.00
31	573.04	296.65
32	581.13	302.52
33	589.08	308.60
34	596.85	314.88
35	597.53	315.45

Circle Center At X = 353.9; Y = 607.7 and Radius, 380.4

FACTOR OF SAFETY = 2.2 (With Equipment Loads)



Central Landfill - Final Buildout Sarasota County, Florida



** PCSTABL5M **

by Purdue University --Slope Stability Analysis--Simplified Janbu, Simplified Bishop or Spencer`s Method of Slices

Run Date:	3/26/2004
Time of Run:	8:59PM
Run By:	JHO
Input Data Filename:	F:final_n.
Output Filename:	F:final_n.OUT
Unit:	ENGLISH
Plotted Output Filename:	F:final_n.PLT

PROBLEM DESCRIPTION Central Landfill - Final Buildout Sarasota County, Florida

BOUNDARY COORDINATES

14 Top Boundaries 41 Total Boundaries

Boundary No.	X-Left (ft)	Y-Left (ft)	X-Right (ft)	Y-Right (ft)	Soil Type Below Bnd
1	,00	220.00	167.33	220.00	1
2	167.33	220.00	185.33	226.00	1
3	185.33	226.00	215.33	226.00	1
4	215.33	226.00	233.33	220.00	1
5	233.33	220.00	248.33	220.00	1
6	248.33	220.00	287.33	233.00	1
7	287.33	233.00	300.00	233.00	2
8	300.00	233.00	432.00	277.00	2
9	432.00	277.00	452.00	277.00	2 1
10	452.00	277.00	551.00	310.00	2
11	551.00	310.00	571.00	310.00	2
12	571.00	310.00	587.20	315.40	2
13	587.20	315.40	1507.20	320.00	2
14	1507.20	320.00	1600.00	320.00	2
15	301.82	231.50	432.20	275.00	3
16	432.20	275.00	452.32	275.00	3
17	452.32	275.00	551.32	308.00	3
18	551.32	308.00	571.32	308.00	3
19	571.32	308.00	587.53	313.40	3
20	587.53	313.40	1507.20	318.00	3
21	1507.20	318.00	1600.00	318.00	3
22	302.11	231.07	432.41	274.50	4
23	432.41	274.50	452.41	274.50	4
24	452.41	274.50	551.41	307.50	4
25	551.41	307.50	557.41	307.50	4
26	571.41	307.50	587.61	312.90	4
27	587.61	312.90	1507.20	317.50	4
28	1507.20	317.50	1600.00	317.50	4
29	287.33	233.00	288.32	231.50	1
30	288.32	231.50	301.82	231.50	5
31	301.82	231.50	302.11	231.07	5
32	302.11	231.07	322.39	226.00	5
33	322.39	226.00	1600.00	220.00	1
34	288.32	231.50	200.00	231.00	I 6
35	288.00	231.00	300.32	231.00	6
0C 7C	300.32	231,00	1600 00	225.50	6
30	JZZ.JZ 200 66	223.30	7000.00	223.30	- - 1
20	200.00	231.00	300 20	230.00	1
53	209.32	250.00	500.20	250.00	Ŧ

40	300.20	230.00	322.20	224.50	1
41	322.20	224.50	1600.00	224.50	1

ISOTROPIC SOIL PARAMETERS

6 Type(s) of Soil

Soil	Total	Saturated	Cohesion	Friction	Pore	Pressure	Piez.
Туре	Unit Wt.	Unit Wt.	Intercept	Angle	Pressure	Constant	Surface
No.	(pcf)	(pcf)	(psf)	(deg)	Param.	(psf)	No.
1	105.0	130.0	.0	30.0	.00	.0	1
2	105.0	120.0	.0	30.0	.00	.0	1
3	62.4	62.4	.0	20.0	.00	.0	1
4	70.0	70.0	.0	34.1	.00	.0	1
5	62.4	62.4	.0	10.0	.00	.0	1
6	90.0	100.0	.0	30.0	.00	.0	1

1 PIEZOMETRIC SURFACE (S) HAVE BEEN SPECIFIED Unit Weight of Water = 62.40

Piezometric	Surface No.	1 Specified by	2 Coordinate	Points
Point	X-Water	Y-Water		
No.	(ft)	(ft)		
1	.00	220.00		
2	1600.00	220.00		

BOUNDARY LOAD (S)

1 Load(s) Specified

Load	X-Left	X-Right	Intensity	Deflection
No.	(ft)	(ft)	(psf)	(deg)
1	587.20	597.50	2152.8	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Circular Surfaces, Has Been Specified.

2500 Trial Surfaces Have Been Generated.

50 Surfaces Initiate From Each Of 50 Points Equally Spaced Along The Ground Surface Between X = 200.00 ft. and X = 300.00 ft.

Each Surface Terminates Between X = 587.20 ft. and X = 650.00 ft.

Unless Further Limitations Were Imposed, The Minimum Elevation At Which A Surface Extends Is Y = .00 ft.

10.00 ft. Line Segments Define Each Trial Failure Surface.

The Following is the Most Critical Of The Trial Failure Surfaces Examined.

Safety Factors Are Calculated By The Modified Bishop Method

Failure Surface Specified By 37 Coordinate Points Point X-Surf Y-Surf

oint	X-Surf	Y-Surf
No.	(ft)	(ft)
1	255.10	222.26
2	264.93	224.10
3	274.75	225.99
4	284.56	227.92

5	294.37	229.89
6	304.16	231.92
7	313.94	233.99
8	323.72	236.10
9	333.48	238.26
10	343.24	240.46
11	352.98	242.71
12	362.71	245.00
13	372.44	247.34
14	382.15	249.73
15	391.85	252.16
16	401.54	254.63
17	411.21	257.15
18	420.88	259.71
19	430.53	262.32
20	440.18	264.97
21	449.81	267.67
22	459.42	270.41
23	469.03	273.20
24	478.62	276.03
25	488.19	278.91
26	49/./6	281.83
21	5U/.5L	284.79
20	526 37	207.00
30	535 88	290.05
31	545 37	297 09
32	554.85	300.27
33	564.32	303.50
34	573.77	306.77
35	583.20	310.09
36	592.62	313.45
37	598 17	315.45

Circle Center At X = -137.7; Y = 2346.3 and Radius, 2160.1

FACTOR OF SAFETY = 2.3 (With Equipment Loads)







Purdue University --Slope Stability Analysis--Simplified Janbu, Simplified Bishop or Spencer`s Method of Slices

Run Date:	3/26/2004
Time of Run:	1:30PM
Run By:	JHO
Input Data Filename:	F:final_s.
Output Filename:	F:final_s.OUT
Unit:	ENGLISH
Plotted Output Filename:	F:final_s.PLT

PROBLEM DESCRIPTION Central Landfill - Final Buildout Sarasota County, Florida

BOUNDARY COORDINATES

13 Top Boundaries 40 Total Boundaries

Boundary	X-Left	Y-Left	X-Right	Y-Right	Soil Type
No.	(ft)	(ft)	(ft)	(ft)	Below Bnd
1	.00	220.00	198.33	220.00	1
2	198.33	220.00	237.33	233.00	1
3	237.33	233.00	267.33	233.00	1
4	267.33	233.00	277.33	231.00	1
5	277.33	231.00	287.33	233.00	1
6	287.33	233.00	300.00	233.00	2
7	300 00	233 00	432.00	277.00	2
8	432 00	277 00	452.00	277.00	2
G C	452.00	277.00	551.00	310.00	2
10	551 00	310 00	571.00	310.00	2
11	571 00	310 00	587.20	315.40	2
12	587 20	315 40	1507.20	320.00	2
13	1507.20	320 00	1600.00	320.00	2
11	301 82	231 50	432 33	275.00	3
14	120 22	275 00	452.33	275 00	۲ ۲
15	452.55	275.00	551 33	308.00	ň
10	402.00	275.00	571 33	308.00	ר א
10	DD1.33 E71 33	300.00	597 53	313 40	3
18	5/1.33	308.00	1507.33	318 00	3
19	587.53	313.40	1600.00	318.00	
20	1507.20	318.00	1000.00	274 50	3
21	302.11	231.07	452.41	274.50	4
22	432.41	274.50	452.41	2/4.50	4
23	452.41	274.50	551.41	307.50	4
24	551.41	307.50	557.41	307.50	4
25	571.41	307.50	587.61	312.90	4
26	587.61	312.90	1507.20	317.50	4
27	1507.20	317.50	1600.00	317.50	4
28	287.33	231.50	288.33	231.50	· 1
29	288.33	231.50	301.83	231.50	5
30	301.83	231.50	302.11	231.07	5
31	302.11	231.07	312.37	228.50	5
32	312.37	228.50	1600.00	225.30	5
33	288.33	231.50	288.66	231.00	1
34	288.66	231.00	300.32	231.00	6
35	300.32	231.00	312.33	228.00	6
36	312.33	228.00	1600.00	224.80	6
37	288.66	231.00	289.32	230.00	1
38	289.32	230.00	300.20	230.00	. 1
39	300.20	230.00	312.20	227.00	1
40	312.20	227.00	1600.00	223.80	1

ISOTROPIC SOIL PARAMETERS

6 Type(s) of Soil

Soil	Total	Saturated	Cohesion	Friction	Pore	Pressure	Piez.
Туре	Unit Wt.	. Unit Wt.	Intercept	Angle	Pressure	Constant	Surface
No.	(pcf)	(pcf)	(psf)	(deg)	Param.	(psf)	No.
1	105.0	130.0	.0	30.0	.00	.0	1
2	105.0	120.0	.0	30.0	.00	.0	1
3	62.4	62.4	.0	20.0	.00	.0	1
4	70.0	70.0	.0	34.1	.00	.0	1
5	62.4	62.4	.0	10.0	.00	.0	1
6	90.0	100.0	.0	20.0	.00	.0	1

1 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED Unit Weight of Water = 62.40

Piezometric	Surface No.	1 Specified by	2 Coordinate	Points
Point	X-Water	Y-Water		
No.	(ft)	(ft)		
1	.00	220.00		
2	1600.00	220.00		

BOUNDARY LOAD (S)

1 Load(s) Specified

Load	X-Left	X-Right	Intensity	Deflection
No.	(ft)	(ft)	(psf)	(deg)
1	587.20	597.70	2152.8	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

1000 Trial Surfaces Have Been Generated.

3 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is 10.0

Box	X-Left	Y-Left	X-Right	Y-Right	Height
No.	(ft)	(ft)	(ft)	(ft)	(ft)
1	300.30	231.30	311.80	228.40	.25
2	312.00	228.30	313.00	228.50	.25
3	432.00	227.95	687.20	227.32	.25

Following is the Most Critical Of The Trial Failure Surfaces Examined.

Safety Factors Are Calculated By The Modified Janbu Method

Failure Surface Specified By 16 Coordinate Points

~ ~ ~ ~		
Point	X-Surf	Y-Surf
No.	(ft)	(ft)
1	294.37	233.00
2	295.74	231.71
3	305.57	229.91
4	312.17	228.42
. 5	546.75	227.69
6	549.54	237.29



FACTOR OF SAFETY = 1.3 (With Equipment Loads)





Central Landfill - Final Buildout Sarasota County, Florida F:\PROJECT\SARASOTA\09201010.15\SLOPE\FINAL_N.PL2 Run By: JHO 3/26/2004 9:12PM

** PCSTABL5M ** by Purdue University

--Slope Stability Analysis--Simplified Janbu, Simplified Bishop or Spencer's Method of Slices

Run Date:	3/26/2004
Time of Run:	2:07PM
Run By:	JHO
Input Data Filename:	F:final n.
Output Filename:	F:final_n.OUT
Unit:	ENGLISH
Plotted Output Filename:	F:final n.PLT

PROBLEM DESCRIPTION Central Landfill - Final Buildout Sarasota County, Florida

BOUNDARY COORDINATES

14 Top Boundaries 41 Total Boundaries

No.(ft)(ft)(ft)(ft)Below Bnd1.00220.00 167.33 220.0012 167.33 220.00 185.33 226.0013 185.33 226.00 215.33 226.0014 215.33 226.00 233.33 220.0015 233.33 220.00 248.33 220.0016 248.33 220.00 233.00 17 287.33 233.00 300.00 233.0028 300.00 233.00 432.00 277.00 29 432.00 277.00 551.00 310.00 210 452.00 277.00 551.00 310.00 211 551.00 310.00 587.20 315.40 213 587.20 315.40 1507.20 320.00 214 1507.20 320.00 1600.00 320.00 215 301.82 231.50 432.20 275.00 316 432.20 275.00 51.32 308.00 319 571.32 308.00 587.53 313.40 320 587.53 313.40 $30.31.40$ 321 1507.20 316.00 1600.00 318.00 322 302.11 231.07 452.41 274.50 4 23 432.41 274.50 557.41 307.50 4 24 452.41 274.50 <th>Boundary</th> <th>X-Left</th> <th>Y-Left</th> <th>X-Right</th> <th>Y-Right</th> <th>Soil Type</th>	Boundary	X-Left	Y-Left	X-Right	Y-Right	Soil Type
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	No.	(ft)	(ft)	(ft)	(ft)	Below Bnd
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1	.00	220.00	167.33	220.00	1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2	167.33	220.00	185.33	226.00	1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3	185.33	226.00	215.33	226.00	1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	4	215.33	226.00	233.33	220.00	1
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	5	233.33	220.00	248.33	220.00	1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6	248.33	220.00	287.33	233.00	1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	7	287.33	233.00	300.00	233.00	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$.8	300.00	233.00	432.00	277.00	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	9	432.00	277.00	452.00	277.00	2
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10	452.00	277.00	551.00	310.00	2
12 571.00 310.00 587.20 315.40 215.40 220.00 2 13 587.20 315.40 1507.20 320.00 2 14 1507.20 320.00 1600.00 320.00 2 15 301.82 231.50 432.20 275.00 3 16 432.20 275.00 452.32 275.00 3 16 432.20 275.00 551.32 308.00 3 17 452.32 275.00 551.32 308.00 3 18 551.32 308.00 587.53 313.40 3 20 587.53 313.40 1507.20 318.00 3 21 1507.20 318.00 1600.00 318.00 3 22 302.11 231.07 432.41 274.50 4 23 432.41 274.50 452.41 274.50 4 24 452.41 274.50 557.41 307.50 4 25 551.41 307.50 587.61 312.90 4 27 587.61 312.90 507.20 317.50 4 28 1507.20 317.50 1600.00 317.50 4 29 287.33 233.00 288.32 231.50 1 30 288.32 231.50 302.11 231.07 5 31 301.82 231.50 302.11 231.00 5 31 301.82 231.50 3	11	551.00	310.00	571.00	310.00	2
13 587.20 315.40 1507.20 320.00 2 14 1507.20 320.00 1600.00 320.00 2 15 301.82 231.50 432.20 275.00 3 16 432.20 275.00 452.32 275.00 3 17 452.32 275.00 551.32 308.00 3 18 551.32 308.00 587.53 313.40 3 20 587.53 313.40 1507.20 318.00 3 21 1507.20 318.00 1600.00 318.00 3 22 302.11 231.07 432.41 274.50 4 23 432.41 274.50 452.41 274.50 4 24 452.41 274.50 557.41 307.50 4 25 551.41 307.50 587.61 312.90 4 27 587.61 312.90 1507.20 317.50 4 28 1507.20 317.50 1600.00 317.50 4 29 287.33 233.00 288.32 231.50 551.41 30 288.32 231.50 302.11 231.07 5 31 301.82 231.50 302.11 231.07 5 33 322.39 226.00 5 533.3 322.39 226.00 533.3 35 288.66 231.00 1600.00 226.00 5	12	571.00	310.00	587.20	315,40	2
14 1507.20 320.00 1600.00 320.00 2 15 301.82 231.50 432.20 275.00 3 16 432.20 275.00 452.32 275.00 3 17 452.32 275.00 551.32 308.00 3 18 551.32 308.00 571.32 308.00 3 19 571.32 308.00 587.53 313.40 3 20 587.53 313.40 1507.20 318.00 3 21 1507.20 318.00 1600.00 318.00 3 22 302.11 231.07 432.41 274.50 4 23 432.41 274.50 452.41 274.50 4 24 452.41 274.50 4 25 551.41 307.50 4 24 452.41 274.50 457.41 307.50 4 25 551.41 307.50 557.41 307.50 4 26 571.41 307.50 587.61 312.90 4 27 587.61 312.90 1507.20 317.50 4 28 1507.20 317.50 1600.00 317.50 4 29 287.33 233.00 288.32 231.50 5 31 301.82 231.50 302.11 231.07 5 32 302.11 231.07 52.39 226.00 5 33 322.39 226.00 1600.00 <td>13</td> <td>587.20</td> <td>315.40</td> <td>1507.20</td> <td>320.00</td> <td>2</td>	13	587.20	315.40	1507.20	320.00	2
15301.82231.50 432.20 275.00 316 432.20 275.00 452.32 275.00 317 452.32 275.00 551.32 308.00 318 551.32 308.00 571.32 308.00 319 571.32 308.00 587.53 313.40 320 587.53 313.40 1507.20 318.00 321 1507.20 318.00 1600.00 318.00 322 302.11 231.07 432.41 274.50 423 432.41 274.50 452.41 274.50 424 452.41 274.50 557.41 307.50 425 551.41 307.50 587.61 312.90 426 571.41 307.50 587.61 312.90 427 587.61 312.90 1507.20 317.50 428 1507.20 317.50 1600.00 317.50 429 287.33 233.00 288.32 231.50 130 288.32 231.50 302.11 231.07 531 301.82 231.50 302.11 231.07 533 322.39 226.00 1600.00 226.00 534 288.32 231.50 288.66 231.00 1 35 288.66 231.00 300.32 231.00 6	14	1507.20	320.00	1600.00	320.00	2
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34 288.32 231.50 288.66 231.00 1 35 288.66 231.00 300.32 231.00 6	33	322.39	226.00	1600.00	226.00	5
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38 288.66 231.00 289.32 230.00 1	38	288.66	231.00	289.32	230.00	1

39	289.32	230.00	300.20	230.00	1
40	300.20	230.00	322.20	224.50	1
41	322.20	224.50	1600.00	224.50	1

ISOTROPIC SOIL PARAMETERS

6 Type(s) of Soil

Soil	Total	Saturated	Cohesion	Friction	Pore	Pressure	Piez.
Туре	Unit Wt.	Unit Wt.	Intercept	Angle	Pressure	Constant	Surface
No.	(pcf)	(pcf)	(psf)	(deg)	Param.	(psf)	No.
1	105.0	130.0	.0	30.0	.00	.0	1
2	105.0	120.0	.0	30.0	.00	.0	1
·· 3	62.4	62.4	.0	20.0	.00	.0	1
4	70.0	70.0	.0	34.1	.00	.0	1
5	62.4	62.4	.0	10.0	.00	.0	1
6	90.0	100.0	.0	30.0	.00	.0	1

1 PIEZOMETRIC SURFACE(S) HAVE BEEN SPECIFIED Unit Weight of Water = 62.40

Piezometric	Surface No.	1 Specified by	2	Coordinate	Points
Point	X-Water	Y-Water			
No.	(ft)	(ft)			
1	.00	220.00			
2	1600.00	220.00			

BOUNDARY LOAD (S)

1 Load(s) Specified

Load	X-Left	X-Right	Intensity	Deflection
No.	(ft)	(ft)	(psf)	(deg)
1	587.20	597.50	2152.8	.0

NOTE - Intensity Is Specified As A Uniformly Distributed Force Acting On A Horizontally Projected Surface.

A Critical Failure Surface Searching Method, Using A Random Technique For Generating Sliding Block Surfaces, Has Been Specified.

1000 Trial Surfaces Have Been Generated.

3 Boxes Specified For Generation Of Central Block Base

Length Of Line Segments For Active And Passive Portions Of Sliding Block Is $10.0\,$

Box	X-Left	Y-Left	X-Right	Y-Right	height
No.	(ft)	(ft)	(ft)	(ft)	(Īt)
1	300.26	231.27	322.04	225.83	.25
2	322.09	225.75	323.00	225.75	.25
3	432.00	225.75	687.20	225.75	.25

The Following is the Most Critical Of The Trial Failure Surfaces Examined.

Safety Factors Are Calculated By The Modified Janbu Method

Failure Surface Specified By 16 Coordinate Points Point X-Surf Y-Surf No. (ft) (ft) 298.60 233.00 1 2 301.58 230.93 3 322.62 225.65

4. 5	542.89	225.63
S C	549.64	233.UI
6	556.22	240.54
7	562.27	248.50
8	569.04	255.86
. 9	576.10	262.94
10	582.30	270.79
11	588.70	278.48
12	593.53	287.23
13	600.18	294.70
14	605.96	302.86
15	611.08	311.45
16	614.55	315.54

FACTOR OF SAFETY = 1.3 (With Equipment Loads)

October 7, 2003 File No. 09201010.15

MEMORANDUM

TO: Joseph H. O'Neill

FROM: Lindsey E. Kennelly

SUBJECT: Stormwater Berm Stability, CCSWDC Landfill, Sarasota County, Florida

In determining the slope stability of the stormwater berm with a 2 (horizontal) to 1 (vertical) sideslope atop the 3 (horizontal) to 1 (vertical) landfill sideslope, three cases were examined.

• Case I: Stability of the stormwater berm accounting for equipment loads on the proposed intermediate cover soils. This case examined the failure plane along the soil/soil interface of the landfill sideslope (see Figure 1).

Southwest District Tampa

- Case II: Stability of the sideslopes accounting for equipment loads with the intermediate covers and waste or geosynthetic cover during closure. This case analyzed the failure plane along the soil/geosynthetic interface. The liner system has approximately two feet of protective cover atop it (see Figure 2).
- Case III (Failure plane is along the interface of the soil and geosynthetic materials): Stability of the sideslopes during closure with seepage parallel to the sideslope.

Calculations Summary

In determining the factor of safety, a free body diagram of the stormwater berm/landfill sideslope system was created. The total vertical load accounts for the weight of the soil as well as the load imparted by the Caterpillar D5G Dozer. The shear load and normal load were determined by trigonometric functions. To determine the shear stress and normal stress the respective loads were divided by the interface area. The shear resistance factor accounts for the shear stress and the interface friction angle. The factor of safety was determined by dividing the shear resistance by the shear stress.

A minimum factor of safety of 1.3 for short-term operations or construction equipment was targeted and a factor of safety of 1.5 for long term static closure condition was targeted for closure. Refer to Attachment A for reference material (Army Corp of Engineer) for the short term loading conditions.

(resubmitted from 10/7/03)

Memorandum to Joe O'Neill October 7, 2003 Page 2

In Case I (The failure plane is located along the proposed berm and the cover soils or intermediate cover), the factor of safety was determined to be approximately 1.74. An interface friction angle for sand of 30 degrees was used for the soil/soil interface.

In Case II (The failure plane is along the cover soil and the geosynthetic materials or intermediate cover and waste materials), the factor of safety was determined to be approximately 1.3. To obtain this factor of safety, the interface friction angle between the soil and geosynthetic interface or intermediate cover soils must be 23 degrees.

In Case III, the factor of safety was determined to be approximately 1.5. To obtain this factor of safety, the interface friction angle between the soil and geosynthetic interface must be a minimum of 26 degrees. The hydraulic conductivity of the geocomposite layer should be at least 5 centimeters per second. A 25year/24 hour storm event used in the calculations to estimate seepage into the soils.

Results:

• The proposed 2(H):1(V) berm is stable with equipment loading and protective cover or intermediate cover soils with the following shear strength parameters;

Sand Phi angle = 30 degrees Cohesion = 0 pounds per square foot

• The proposed 3(H):1(V) sideslope is stable with equipment loading with protective cover soils or intermediate cover soils soils with the following shear strength parameters;

Sand/Geosynthetic or Intermediate Cover Soils/Waste Interface Phi angle = 23 degrees Cohesion = 0 pounds per square foot

• The proposed 3(H):1(V) sideslope is stable with protective cover (with seepage) soils with the following shear strength parameters;

Sand/Geosynthetic Interface Phi angle = 26 degrees Cohesion = 0 pounds per square foot Sand Permeability of at least 1×10^{-3} centimeters per second <u>Geosynthetic</u> Bi-plannar permeability of 5 centimeters per second

ATTACHMENT A

REFERENCES FOR FACTORS OF SAFETY

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Source: Know Conput Engineens Engineering Manual EM 1110-2-1913 SEE panagraph 65 & TROSTE 6-1 a + B

Chapter 6 Slope Design and Settlement

Section I Embankment Stability

6-1. Embankment Geometry

a. Slopes. For levees of significant height or when there is concern about the adequacy of available embankment materials or foundation conditions, embankment design requires detailed analysis. Low levees and levees to be built of good material resting on proven foundations may not require extensive stability analysis. For these cases, practical considerations such as type and ease of construction, maintenance, seepage and slope protection criteria control the selection of levee slopes.

(1) Type of construction. Fully compacted levees generally enable the use of steeper slopes than those of levees constructed by semicompacted or hydraulic means. In fact, space limitations in urban areas often dictate minimum levee sections requiring select material and proper compaction to obtain a stable section.

(2) Ease of construction. A 1V on 2H slope is generally accepted as the steepest slope that can easily be constructed and ensure stability of any riprap layers.

(3) Maintenance. A 1V on 3H slope is the steepest slope that can be conveniently traversed with conventional mowing equipment and walked on during inspections.

(4) Seepage. For sand levees, a 1V on 5H landside slope is considered flat enough to prevent damage from seepage exiting on the landside slope.

(5) Slope protection. Riverside slopes flatter than those required for stability may have to be specified to provide protection from damage by wave action.

b. Final Levee Grade. In the past, freeboard was used to account for hydraulic, geotechnical, construction, operation and maintenance uncertainties. The term and concept of freeboard to account for these uncertainties is no longer used in the design of levee projects. The risk-based analysis directly accounts for hydraulic uncertainties and establishes a nominal top of protection. Deterministic analysis using physical properties of the foundation and embankment materials should be used to set the final levee grade to account for settlement, shrinkage, cracking, geologic subsidence, and construction tolerances.

c. Crown width. The width of the levee crown depends primarily on roadway requirements and future emergency needs. To provide access for normal maintenance operations and floodfighting operations, minimum widths of 3.05 to 3.66 m (10 to 12 ft) are commonly used with wider turnaround areas provided at specified intervals; these widths are about the minimum feasible for construction using modern heavy earthmoving equipment and should always be used for safety concerns. Where the levee crown is to be used as a higher class road, its width is usually established by the responsible agency.

6-2. Standard Levee Sections and Minimum Levee Section

a. Many districts have established standard levee-sections for particular levee systems, which have proven satisfactory over the years for the general stream regime, foundation conditions prevailing in those areas, and for soils available for levee construction. For a given levee system, several different standard

sections may be established depending on the type of construction to be used (compacted, semicompacted, uncompacted, or hydraulic fill). The use of standard sections is generally limited to levees of moderate height (say less than 7.62 m (25 ft)) in reaches where there are no serious underseepage problems, weak foundation soils, or undesirable borrow materials (very wet or very organic). In many cases the standard levee section has more than the minimum allowable factor of safety relative to slope stability, its slopes being established primarily on the basis of construction and maintenance considerations. Where high levees or levees on foundations presenting special underseepage or stability problems are to be built, the uppermost riverside and landside slopes of the levee are often the same as those of the standard section, with the lower slopes flattened or stability berms provided as needed.

b. The adoption of standard levee sections does not imply that stability and underseepage analyses are not made. However, when borings for a new levee clearly demonstrate foundation and borrow conditions similar to those at existing levees, such analyses may be very simple and made only to the extent necessary to demonstrate unquestioned levee stability. In addition to being used in levee design, the standard levee sections are applicable to initial cost estimate, emergency and maintenance repairs.

c. The minimum levee section shall have a crown width of at least 3.05 m (10 ft) and a side slope flatter than or equal to 1V on 2H, regardless of the levee height or the possibly less requirements indicated in the results of stability and seepage analyses. The required dimensions of the minimum levee section is to provide an access road for flood-fighting, maintenance, inspection and for general safety conditions.

6-3. Effects of Fill Characteristics and Compaction

a. Compacted fills. The types of compaction, water content control, and fill materials govern the steepness of levee slopes from the stability aspect if foundations have adequate strength. Where foundations are weak and compressible, high quality fill construction is not justified, since these foundations can support only levees with flat slopes. In such cases uncompacted or semicompacted fill, as defined in paragraph 1-5, is appropriate. Semicompacted fill is also used where fine-grained borrow soils are considerably wet of optimum or in construction of very low levees where other considerations dictate flatter levee slopes than needed for stability. Uncompacted fill is generally used where the only available borrow is very wet and frequently has high organic content and where space is limited in urban areas both with respect to quantity of borrow and levee geometry, compacted levee fill construction by earth dam procedures is frequently selected. This involves the use of select material, water content control, and compaction procedures as described in paragraph 1-5.

b. Hydraulic Fill. Hydraulic fill consists mostly of pervious sands built with one or two end-discharge or bottom-discharging pipes. Tracked or rubber-tired dozers or front-end loaders are used to move the sand to shape the embankment slopes. Because a levee constructed of hydraulic fill would be very pervious and have a low density, it would require a large levee footprint and would be susceptible to soil liquefaction. Hydraulic fill would also quickly erode upon overtopping or where an impervious covering was penetrated. For these reasons, hydraulic fill may be used for stability berms, pit fills and seepage berms but shall not normally be used in constructing levee embankments. However, hydraulic fill may be used for levees protecting agricultural areas whose failure would not endanger human life and for zoned embankments that include impervious seepage barriers.

Section II Stability Analyses

6-4. Methods of Analysis

The principal methods used to analyze levee embankments for stability against shear failure assume either (a) a sliding surface having the shape of a circular arc within the foundation and/or the embankment or (b) a composite failure surface composed of a long horizontal plane in a relatively weak foundation or thin foundation stratum connecting with diagonal plane surfaces up through the foundation and embankment to the ground surface. Various methods of analysis are described in EM 1110-2-1902, and can be chosen for use where determined appropriate by the designer. Computer programs are available for these analyses, with the various loading cases described in EM 1110-2-1902, so the effort of making such analyses is greatly reduced, and primary attention can be devoted to the more important problems of defining the shear strengths, unit weights, geometry, and limits of possible sliding surfaces.

6-5. Conditions Requiring Analysis

The various loading conditions to which a levee and its foundation may be subjected and which should be considered in analyses are designated as follows: Case I, end of construction; Case II, sudden drawdown from full flood stage; Case III, steady seepage from full flood stage, fully developed phreatic surface; Case IV, earthquake. Each case is discussed briefly in the following paragraphs and the applicable type of design shear strength is given. For more detailed information on applicable shear strengths, methods of analysis, and assumptions made for each case refer to EM 1110-2-1902.

a. Case I - End of construction. This case represents undrained conditions for impervious embankment and foundation soils; i.e., excess pore water pressure is present because the soil has not had time to drain since being loaded. Results from laboratory Q (unconsolidated-undrained) tests are applicable to fine-grained soils loaded under this condition while results of S (consolidated-drained) tests can be used for pervious soils that drain fast enough during loading so that no excess pore water pressure is present at the end of construction. The end of construction condition is applicable to both the riverside and landside slopes.

b. Case II - Sudden drawdown. This case represents the condition whereby a prolonged flood stage saturates at least the major part of the upstream embankment portion and then falls faster than the soil can drain. This causes the development of excess pore water pressure which may result in the upstream slope becoming unstable. For the selection of the shear strengths see Table 6-1a.

c. Case III - Steady seepage from full flood stage (fully developed phreatic surface). This condition occurs when the water remains at or near full flood stage long enough so that the embankment becomes fully saturated and a condition of steady seepage occurs. This condition may be critical for landside slope stability. Design shear strengths should be based on Table 6-1a.

d. Case IV - Earthquake. Earthquake loadings are not normally considered in analyzing the stability of levees because of the low probability of earthquake coinciding with periods of high water. Levees constructed of loose cohesionless materials or founded on loose cohesionless materials are particularly susceptible to failure due to liquefaction during earthquakes. Depending on the severity of the expected earthquake and the importance of the levee, seismic analyses to determine liquefaction susceptibility may be required.

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Table 6-1a Summary of Design Conditions					
Analysis Condition	Shear Strength ^a	Pore Water Pressure			
During and End-of- Construction	Free draining soils - use effective stresses	Free draining soils - Pore water pressures can be estimated using analytical techniques such as hydrostatic pressure computations for no flow or steady seepage analysis techniques (flow nets, finite element analyses or finite difference analyses).			
	Low permeability soils - use undrained strengths and total stresses ^b	Low permeability soils - Total stresses are used; pore water pressures are set to zero in the slope stability computations.			
Steady State Seepage Conditions	Use effective stresses. Residual strengths should be used where previous shear deformation or sliding has occurred.	Estimated from field measurements of pore water pressures, hydrostatic pressure computations for no flow conditions, or steady seepage analysis techniques (flow nets, finite element analyses or finite difference analyses).			
Sudden Drawdown Conditions	Free draining soils - use effective stresses	Free draining soils - First stage computations (before drawdown) - steady-state seepage pore pressures as described for steady state seepage condition. Second and third stage computations (after drawdown) - pore water pressures estimated using same techniques as for steady seepage, except with lowered water levels.			
	Low permeability soils - Three stage computations: First stage use effective stresses; second stage use undrained shear strengths and total stresses; third stage use drained strengths (effective stresses) or undrained strengths (total stresses) depending on which strength is lower - this will vary along the assumed shear surface.	Low permeability soils - First stage computations - steady-state seepage pore pressures as described for steady state seepage condition. Second stage computations - Total stresses are used pore water pressures are set to zero. Third stage computations - Use same pore pressures as free draining soils if drained strengths are being used; where undrained strengths are used pore water pressures are set to zero.			

^a Effective stress parameters can be obtained from consolidated-drained (CD, S) tests (either direct shear or triaxial) or consolidatedundrained (CU, R) triaxial tests on saturated specimens with pore water pressure measurements. Direct shear or Bromhead ring shear tests should be used to measure residual strengths. Undrained strengths can be obtained from unconsolidated-undrained (UU, Q) tests. Undrained shear strengths can also be estimated using consolidated-undrained (CU, R) tests on specimens consolidated to appropriate stress conditions representative of field conditions; however, the "R" or "total stress" envelope and associated c and ö, from CU, R tests should not be used.

^b For saturated soils use ö = 0; total stress envelope with ö > 0 is only applicable to partially saturated soils.

6-6. Minimum Acceptable Factors of Safety

The minimum required safety factors for the preceding design conditions along with the portion of the embankment for which analyses are required and applicable shear test data are shown in Table 6-1b.

6-7. Measures to Increase Stability

Means for improving weak and compressible foundations to enable stable embankments to be constructed thereon are discussed in Chapter 7. Methods of improving embankment stability by changes in embankment section are presented in the following paragraphs.

a. Flatten embankment slopes. Flattening embankment slopes will usually increase the stability of an embankment against a shallow foundation type failure that takes place entirely within the embankment. Flattening embankment slopes reduces gravity forces tending to cause failure, and increases the length of potential failure surfaces (and therefore increases resistance to sliding).



Table 6-1b

Minimum	Factors	of Safety	- Levee	Slope	Stability
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	Applicable Stability Conditions and Required Factors of Safety					
Type of Slope	End-of- Construction	Long-Term (Steady Seepage)	Rapid Drawdown *	Earthquake ^b		
New Levees	1.3	1.4	1.0 to 1.2	(see below)		
Existing Levees	-	1.4°	1.0 to 1.2	(see below)		
Other Embankments and dikes ^d	1.3 ^{e,1}	1.4 ^{c.f}	1.0 to 1.2 ^r	(see below)		

^a Sudden drawdown analyses. F. S. = 1.0 applies to pool levels prior to drawdown for conditions where these water levels are unlikely to persist for long periods preceding drawdown. F. S. = 1.2 applies to pool level, likely to persist for long periods prior to drawdown.

^b See ER 1110-2-1806 for guidance. An EM for seismic stability analysis is under preparation.

^c For existing slopes where either sliding or large deformation have occurred previously and back analyses have been performed to establish design shear strengths lower factors of safety may be used. In such cases probabilistic analyses may be useful in supporting the use of lower factors of safety for design.

^d Includes slopes which are part of cofferdams, retention dikes, stockpiles, navigation channels, breakwater, river banks, and excavation slopes.

^e Temporary excavated slopes are sometimes designed for only short-term stability with the knowledge that long-term stability is not adequate. In such cases higher factors of safety may be required for end-of-construction to ensure stability during the time the excavation is to remain open. Special care is required in design of temporary slopes, which do not have adequate stability for the long-term (steady seepage) condition.

¹ Lower factors of safety may be appropriate when the consequences of failure in terms of safety, environmental damage and economic losses are small.

b. Stability berms. Berms essentially provide the same effect as flattening embankment slopes but are generally more effective because of concentrating additional weight where it is needed most and by forcing a substantial increase in the failure path. Thus, berms can be an effective means of stabilization not only for shallow foundation and embankment type failures but for more deep-seated foundation failures as well. Berm thickness and width should be determined from stability analyses and the length should be great enough to encompass the entire problem area, the extent of which is determined from the soil profile. Foundation failures are normally preceded by lateral displacement of material beneath the embankment toe and by noticeable heave of material just beyond the toe. When such a condition is noticed, berms are often used as an emergency measure to stabilize the embankment and prevent further movement.

6-8. Surface Slides

Experience indicates that shallow slides may occur in levee slopes after heavy rainfall. Failure generally occurs in very plastic clay slopes. They are probably the result of shrinkage during dry weather and moisture gain during wet weather with a resulting loss in shear strength due to a net increase in water content, plus additional driving force from water in cracks. These failures require maintenance and could be eliminated or reduced in frequency by using less plastic soils near the surface of the slopes or by chemical stabilization of the surface soils.

6-5

Section III Settlement

6-9. General

Evaluation of the amount of postconstruction settlement that can occur from consolidation of both embankment and foundation may be important if the settlement would result in loss of freeboard of the levee or damage to structures in the embankment. Many districts overbuild a levee by a given percent of its height to take into account anticipated settlement both of the foundation and within the levee fill itself. Common allowances are 0 to 5 percent for compacted fill, 5 to 10 percent for semicompacted fill, 15 percent for uncompacted fill, and 5 to 10 percent for hydraulic fill. Overbuilding does however increase the severity of stability problems and may be impracticable or undesirable for some foundations.

6-10. Settlement Analyses

Settlement estimates can be made by theoretical analysis as set forth in EM 1110-1-1904. Detailed settlement analyses should be made when significant consolidation is expected, as under high embankment loads, embankments of highly compressible soil, embankments on compressible foundations, and beneath steel and concrete structures in levee systems founded on compressible soils. Where foundation and embankment soils are pervious or semipervious, most of the settlement will occur during construction. For impervious soils it is usually conservatively assumed that all the calculated settlement of a levee built by a normal sequence of construction operations will occur after construction. Where analyses indicate that more foundation material may be necessary from both stability and settlement viewpoints. When the depth of excavation required to accomplish this is too great for economical construction, other methods of control such as stage construction or vertical sand drains may have to be employed, although they seldom are justified for this purpose.

CASE I

STABILITY OF STORMWATER BERM WITH EQUIPMENT

(OPERATIONS)

(SOIL / SOIL INTERFACE)



and the second


Case I Stormwater Berm Diagram, Sarasota County, Sarasota, Florida



CASE II

STABILITY OF SIDESLOPES WITH EQUIPMENT

(OPERATIONS)

(SOIL / GEOSYNTHETIC INTERFACE)





Case Il Stormwater Berm Diagram, Sarasota County, Sarasota, Florida Figure 2.

PASE 10FZ

CASE III

STABILITY OF STORMWATER BERM

(CLOSURE)

625-040-205-a Page 50 of 98

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Table 5-5 RUNOFF COEFFICIENTS FOR A DESIGN STORM RETURN PERIOD OF 10 YEARS OR LESS

		Sandy S	011S	Clay	50115
Slope	Land Use	Min.	Max.	Min.	Max.
Flat	Woodlands	, 0.10	0.15	0.15	0.20
(0-2%)	Pasture, grass, and farmlan	d ^D 0.15	0.20	0.20	0.25
	Rooftops and pavement	0.95	0.95	0.95	0.95
	Pervious pavements	0.75	0.95	0.90	0.95
	SFR: ¹ z-acre lots and large	r 0.30	0.35	0.35	0.45
	Smaller lots	0.35	0.45	0.40	0.50
	Duplexes	0.35	0.45	0.40	0.50
	MFR: Apartments, townhouse	s,			
	and condominiums	0.45	0.60	0.50	0.70
	Commercial and Industrial	0.50	0.95	0.50	0.95
Rolling	Woodlands	0.15	0.20	0.20	0.25
(2-7%)	Pasture, grass, and farmlan	d ^b 0.20	0.25	0.25	0.30
· ·	Rooftops and pavement	0.95	0.95	0.95	0.95
	Pervious pavements ^C	0.80	0.95	0.90	0.95
	SFR: ¹ 2-acre lots and large	er 0.35	0.50	0.40	0.55
	Smaller lots	0.40	0.55	0.45	0.60
	Duplexes	0.40	0.55	0.45	0.60
	MFR: Apartments, townhouse	es,			
	and condominiums	0.50	0.70	0.60	0.80
	Commercial and Industrial	0.50	0.95	0.60	0.95
Steep	Woodlands	0.20	0.25	0.25	0.30
(7%+)	Pasture, grass, and farmlar	nd 0.25	0.35	0.30	0.40
	Rooftops and pavement	0.95	0.95	0.95	0.95
	Pervious pavements	0.85	0.95	0.90	0.95
	SFR: ¹ 2-acre lots and large	er 0.40	0.55	0.50	0.65
	Smaller lots	0.45	0.60	0.55	0.70
	Duplexes	0.45	0.60	0.55	0.70
	MFR: Apartments, townhouse	es,			
	and condominiums	0.60	0.75	0.65	0.85
	Commercial and Industrial	0.60	0.95	0.65	0.95

^aWeighted coefficient based on percentage of impervious surfaces and green areas must be selected for each site.

^bCoefficients assume good ground cover and conservation treatment.

^CDepends on depth and degree of permeability of underlying strata.

Note: SFR = Single Family Residential MFR = Multi-Family Residential

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625-040-205-a Page 51 of 98

Source: F.D. O.T Volume 2 DARMAJE MANNAI

Table 5-6 DESIGN STORM FREQUENCY FACTORS FOR PERVIOUS AREA RUNOFF COEFFICIENTS *

Return Period (years)	Design Storm Frequency Factor, X T
2 to 10	1.0
25	1.1
50	1.2
100	1.25

Reference: Wright-McLaughlin Engineers (1969).

* DUE TO THE INCREASE IN THE DURATION TIME THAT THE PEAK OR NEAR PEAK DISCHARGE RATE IS RELEASED FROM STORMWATER MANAGEMENT SYSTEMS, THE USE OF THESE SHORT DURATION PEAK RATE DISCHARGE ADJUSTMENT FACTORS ARE NOT APPROPRIATE FOR FLOOD ROUTING COMPUTATIONS.





Op Permit



SARASOTA COUNTY

"Dedicated to Quality Service"

January 30, 2004

Susan J. Pelz, P.E. Florida Department of Environmental Protection 3804 Coconut Palm Drive Tampa, Florida 33619-8318

Central County Solid Waste Disposal Complex (CCSWDC) Re: Cell 5 (C-5) /Dewatering Permit No: SO58-299180

Dear Ms. Pelz:

This letter is a supplement to my January 16th correspondence to Kim Ford, a copy of which is attached for your convenience.

You may be aware; however, we have had considerable rainfall this past season. In particular, short period rains of 12 inches over 12 days; 5 inches in two days; and most recently 2.5 inches December 15th. followed by 3.5 inches on December 17th. As a result, C-5 has been impacted with varying quantities of standing water. At one point, we had our contractor pump 2.0+/ million gallons to the leachate storage tank.

Approximately 100,000 gallons of standing storm water resulting from the most recent 6.0+/ inchs of rain, collected at the, intermediate covered, northeast section of Cell No. 4. The construction of the letdown structure had not yet been completed. The upper containment berm at Cell No.4 was breached and the storm water flowed into C-5.

A sampling of C-5 was scheduled in an effort to satisfy our concerns and determine the responsibilities of our contractor. I had a previous discussion with Kim Ford, regarding the general status of C-5; and, I apparently, misinterpreted the department's interest in our situation regarding our contractor.

Once aware of the satisfactory analysis, we began de-watering C-5, and the analyses were sent to Kim Ford for his information. However, after the January 16th inspection we were told to suspend pumping. The discharge of the standing water has been suspended awaiting your determination.

Sincerely.

Paul A. Wingler, P.E.

Project Manager

Attachment Frank Coggins, Manager, Solid Waste Operations cc: Kim B. Ford, P.E., FDEP-Tampa John Morris, P.G., FDEP - Tampa Charles E. Munsey, Onyx Waste Services of Florida, Inc.

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ENVIRONMENTAL SERVICES, Solid Waste Operations • 4000 Knights Trail Road, Nokomis, FL 34275 Tel 941-861-1570 • Fax 941-486-2620

Southwest District Tampa



SARASOTA COUNTY

"Dedicated to Quality Service"

January 16, 2004

Kim B. Ford, P.E. Florida Department of Environmental Protection 3804 Coconut Palm Drive Tampa, Florida 33619-8318

Re: CCC Cell No 5 Standing Water

Dear Mr. Ford:

We have previously discussed the background of the standing water in Cell No 5. The enclosed samples were collected on December 19, 2003.

In order to satisfy ourselves so that we could give direction to Onyx, our contractoperator and the ground water sample matrix was applied. Toxicity Test was also performed to attain a maximum level of comfort.

Iron was detected; however, I believe that the survival of the live test specimens are a more valid indication of the compatibility of the standing water with the storm water of Storm Water Pond No. 1.

The analyses are enclosed for your records.

Sincerely,

Paul Wingler / nm

Paul A. Wingler, P.E. Project Manager

Attachments

cc:

John R. Morris, P.G. Frank Coggins, Manager, Solid Waste Operations

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