



January 15, 2010  
Project No. 09-12-34

Mr. Charles Brown  
MC 124  
Municipal Solid Waste Permits Section  
Texas Commission on Environmental Quality  
P. O. Box 13087  
Austin, Texas 78711-3087

**Re: Response to a TCEQ Notice of Deficiency Letter Dated December 16, 2009,  
Whispering Pines Landfill, MSW Permit No. 1193, Harris County, Texas;  
WWC 11995235, 12441213, and 12775986; RN100216878/CN601528094**

Dear Mr. Brown:

This letter is written to provide a response to the comments in a letter dated December 16, 2009, from the Texas Commission on Environmental Quality (TCEQ), regarding the Groundwater Sampling and Analysis Plan (GWSAP) Permit Modification. The letter requested that the TCEQ comments be addressed within 30 days (January 15, 2010). The TCEQ's comment/questions are provided below in italics with our response immediately following.

Comment 1: *The original GWSAP modification submittal, received on March 28, 2008, indicated that page 16 was the first page of Section 4 (Sampling Frequency – Detection Monitoring). However, it appears that page 15 is now the first page of Section 4. Please clarify this discrepancy and revise as needed.*

Response: The original GWSAP submittal in March 2008, did show page 16 as being the first page of Section 4 (Sampling Frequency – Detection Monitoring) in the underlined/strikeout document. Due to the deletion of text in other sections of the GWSAP, Section 4 (Sampling Frequency – Detection Monitoring) was shifted up to page 15 in the clean replacement document.

Comment 2: *Please remove page A.4, Table 2 (Minimum Precision Requirements) and Table 3 (Minimum Accuracy Limits) from Appendix A, as they are inconsistent with the quality control specification limits in Section 4.1 (Analyzed Constituents). Please remove or revise page A.5 (Notes to Table 1), as Table 1 has been revised and this page no longer appears applicable. Please remove pages C.12 and C.13 (Ground Water Sample Field Filtration Procedures) from Appendix C. In accordance with 30 TAC §330.405(c), field filtering is no longer allowed and therefore this section is inconsistent with current MSW regulations. In addition please review all pages in Appendix A, B, C and D to ensure that they are consistent with the revisions to the GWSAP and current MSW regulations.*

Response: Pages A.4 and A.5 have been removed from Appendix A, as requested. Also, pages C.1 thru C.10 regarding calibration procedures have been removed and information regarding calibration procedures has been added to Section 2.2.4 of the GWSAP. Pages C.12 and C.13 have been removed from Appendix C, as requested. Page C.11, Basic Water Level Indicator Procedures, is now page C.1 of Appendix C. In addition, pages B.2 thru B.6, B.9, B.10, B.12 and B.13 have been removed from Appendix B. Page B.7, Recommended Containerization and Preservation of Samples, is now page B.2. Page B.8, Chain-of-Custody, is now page B.3 and page B.11, Ground Water Monitor Well Condition Report, is now page B.4 of Appendix B. No changes were made to Appendix D. Appendices A, B and C have been revised to meet the current MSW regulations. Please note that a Statistical Analysis Plan has been added to the GWSAP as Appendix E.

Comment 3: *Please revise Section 2.4.2 (Sample Collection Order) to indicate in accordance with 30 TAC §330.405(b)(2), sampling at each event shall proceed from the point with the highest water-level elevation to those with successively lower elevations unless contamination is known to be present, in which case wells not likely to be contaminated shall be sampled prior to those that are known to be contaminated.*

Response: The following language has been added to Section 2.4.2: “In accordance with 30 TAC §330.405(b)(2), sampling at each event shall proceed from the point with the highest water-level elevation to those with successively lower elevations unless contamination is known to be present, in which case wells not likely to be contaminated shall be sampled prior to those that are known to be contaminated unless an alternative procedure is approved by the executive director.”

Comment 4: *Section 2.5.1, (Field Logs): Please include language describing how the field logs will be stored, reported and/or made available to the Texas Commission on Environmental Quality (TCEQ).*

Response: The following language has been added to Section 2.5.1: “The Field Information Logs will be produced, collected, stored and made available for future TCEQ requests and or inspections.”

Comment 5: *Please revise the term “notification of” in the first paragraph of Section 5.3 (Statistically Significant Constituents and Verification Resampling) to the term “determining” in accordance with §330.407(b)(2).*

Response: Section 5.3 has been revised as requested; the term “notification of” has been replaced with the term “determining”.

Comment 6: *Please revise the GWSAP to indicate that current wells will not be decommissioned until all new wells have been installed and that monitoring will continue for total metals in all monitoring wells that are to be decommissioned until background is established in the new wells.*

Response: Monitoring will continue for the **previously approved list of filtered parameters** while collecting background samples for the revised list of unfiltered constituents in all monitoring wells. Current monitor wells will not be decommissioned until all new wells have been installed and background for total metals is established in the new wells. Additional wording to GWSAP Section 4.2, Background, has been added to reflect this requirement.

Comment 7: *It is indicated in Section 2.3.6 (Purge Water Management) that, on an individual monitoring well basis, if purge water is known or suspected to be contaminated it will be containerized until analytical results are available, at which time proper arrangements for disposal will be made. Otherwise, purge water will be discarded on the ground surface. Please be advised that the TCEQ is currently working on updating the recommended practices for purge water management. As soon as they are finalized, we will address them in a follow-up letter in order for you to revise the facility's GWSAP accordingly.*

Response: Comment is noted.

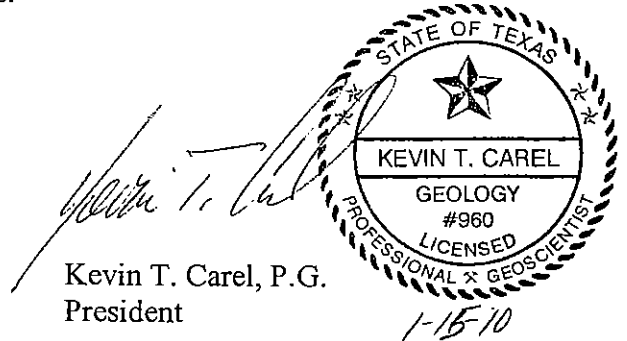
We trust this information meets your needs, please call Mr. Burgess Stengl at (713) 671-1561 or us at (817) 337-0112 if you have any questions.

Sincerely,

THE CAREL CORPORATION



Steven J. Wimmer  
Remedial and Environmental Services Manager



Kevin T. Carel, P.G.  
President

Att: TCEQ Part 1 Application Page 1 and Signature Page  
GWSAP – Underlined/Strikeout Replacement Pages  
GWSAP – Clean Replacement Pages

cc: TCEQ Region 12 Office  
Burgess Stengl – Republic Services, Inc.  
Mark Allendorf – Republic Services, Inc. (e-copy)  
Jose Molina – Whispering Pines Landfill

**TCEQ Part 1 Application Page 1 and Signature Page**



# Texas Commission on Environmental Quality

## Permit or Registration Application for Municipal Solid Waste Facility

### Part I

#### A. General Information

|  |                           |        |    |       |
|--|---------------------------|--------|----|-------|
| Facility Name:                             | Whispering Pines Landfill |        |    |       |
| Physical or Street Address (if available): | 8101 Little York Road     |        |    |       |
| (City) (County)( State)( Zip Code):        | Houston                   | Harris | TX | 77016 |
| (Area Code) Telephone Number:              | 713-633-2720              |        |    |       |
| Charter Number:                            |                           |        |    |       |

If the application is submitted on behalf of a corporation, provide the Charter Number as recorded with the Office of the Secretary of State for Texas.

|                                     |                                  |        |    |       |
|-------------------------------------|----------------------------------|--------|----|-------|
| Operator Name <sup>1</sup> :        | Whispering Pines Landfill TX, LP |        |    |       |
| Mailing Address:                    | 8101 Little York Road            |        |    |       |
| (City) (County)( State)( Zip Code): | Houston                          | Harris | TX | 77016 |
| (Area Code) Telephone Number:       | 713-633-2720                     |        |    |       |
| (Area Code) FAX Number:             | 713-633-4262                     |        |    |       |
| Charter Number:                     |                                  |        |    |       |

If the permittee is the same as the operator, type "Same as Operator".

|  |                  |  |    |  |
|--|------------------|--|----|--|
| Permittee Name:                            | Same as Operator |  |    |  |
| Physical or Street Address (if available): |                  |  |    |  |
| (City) (County)( State)( Zip Code):        |                  |  | TX |  |
| (Area Code) Telephone Number:              |                  |  |    |  |
| Charter Number:                            |                  |  |    |  |

If the application is submitted by a corporation or by a person residing out of state, the applicant must register an Agent in Service or Agent of Service with the Texas Secretary of State's office and provide a complete mailing address for the agent. The agent must be a Texas resident.

|                                     |                        |        |    |       |
|-------------------------------------|------------------------|--------|----|-------|
| Agent Name:                         | CT Corporation System  |        |    |       |
| Mailing Address:                    | 350 N. St. Paul Street |        |    |       |
| (City) (County)( State)( Zip Code): | Dallas                 | Dallas | TX | 75201 |
| (Area Code) Telephone Number:       | 214-979-1172           |        |    |       |
| (Area Code) FAX Number:             | 214-754-0921           |        |    |       |

#### Application Type:

|                          |              |                                     |                     |                                     |                               |
|--------------------------|--------------|-------------------------------------|---------------------|-------------------------------------|-------------------------------|
| <input type="checkbox"/> | Permit       | <input type="checkbox"/>            | Major Amendment     | <input type="checkbox"/>            | Minor Amendment               |
| <input type="checkbox"/> | Registration | <input checked="" type="checkbox"/> | Modification        | <input type="checkbox"/>            | Temporary Authorization       |
|                          |              | <input type="checkbox"/>            | w/Public Notice     |                                     |                               |
|                          |              | <input checked="" type="checkbox"/> | w/out Public Notice | <input checked="" type="checkbox"/> | Notice of Deficiency Response |

<sup>1</sup> The operator has the duty to submit an application if the facility is owned by one person and operated by another [30 TAC 305.43(b)]. The permit will specify the operator and the owner who is listed on this application [Section 361.087 Texas Health and Safety Code].

Signature Page

I, Burgess Stengl Environmental Manager  
(Operator) (Title)

certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: Burgess Stengl Date: 1/14/10

TO BE COMPLETED BY THE OPERATOR IF THE APPLICATION IS SIGNED BY AN AUTHORIZED REPRESENTATIVE FOR THE OPERATOR

I, \_\_\_\_\_, hereby designate \_\_\_\_\_  
(Print or Type Operator Name) (Print or Type Representative Name)

as my representative and hereby authorize said representative to sign any application, submit additional information as may be requested by the Commission; and/or appear for me at any hearing or before the Texas Commission on Environmental Quality in conjunction with this request for a Texas Water Code or Texas Solid Waste Disposal Act permit. I further understand that I am responsible for the contents of this application, for oral statements given by my authorized representative in support of the application, and for compliance with the terms and conditions of any permit which might be issued based upon this application.

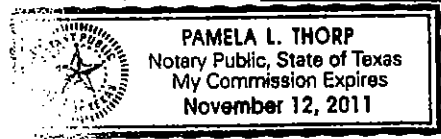
\_\_\_\_\_  
Printed or Typed Name of Operator or Principal Executive Officer

\_\_\_\_\_  
Signature

SUBSCRIBED AND SWORN to before me by the said Burgess Stengl

On this 11<sup>th</sup> day of January, 2010

My commission expires on the \_\_\_\_\_ day of \_\_\_\_\_



Pamela L. Thorp  
Notary Public in and for  
Harris County, Texas

(Note: Application Must Bear Signature & Seal of Notary Public)

## **GWSAP – Underlined/Strikeout Replacement Pages**

**WHISPERING PINES LANDFILL  
HARRIS COUNTY, TEXAS  
TCEQ PERMIT NO. 1193**

**DETECTION MONITORING  
GROUNDWATER SAMPLING AND  
ANALYSIS PLAN(GWSAP)**

Prepared for:

Whispering Pines TX, LP

March 1999

Revised December 2006

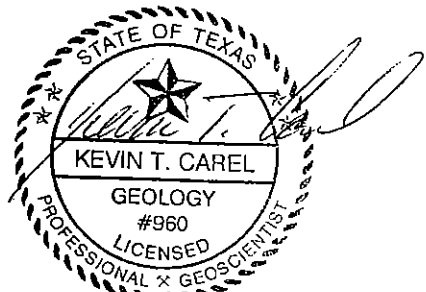
~~Revised July 2009~~

Revised January 2010

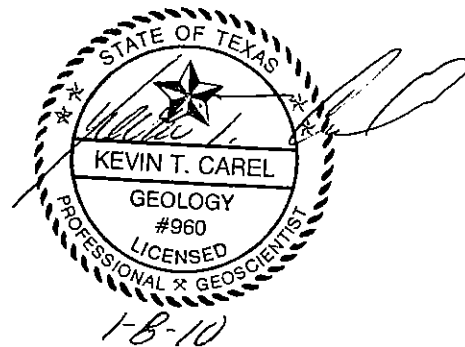
Prepared by:



136 Pecan Street  
Keller, Texas 76248  
(817) 337-0112



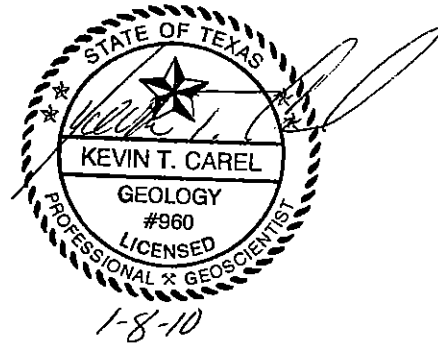
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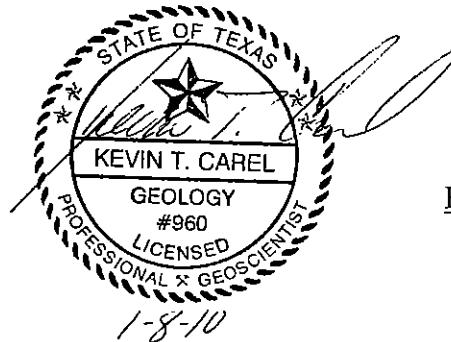
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## 1 INTRODUCTION

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This Ground Water Sampling and Analysis Plan (GWSAP) has been prepared for the Whispering Pines Landfill site (Texas Commission on Environmental Quality [TCEQ] Permit No. 1193). The Whispering Pines Landfill is a Type 1 Municipal Solid Waste Disposal Facility located immediately west of FM Highway 527 (east Houston - Dyersdale Road), 1/4 mile north of Little York Road, and immediately north of Houston City limits in Harris County, Texas.

The following plan covers the procedures for collecting representative samples from ground water monitoring wells and the basic laboratory requirements for obtaining valid, defensible data. The plan is limited to sampling and analysis requirements and does not include monitoring well placement, design and construction, or well development procedures.

## 2 FIELD PROCEDURES

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### 2.1 Field Sampling Health and Safety Plan

A health and safety plan is required for all ground water sampling events at the Whispering Pines Landfill. Prior to monitoring well purging and sampling, the sampling contractor's Ground Water Sampling Health and Safety Plan must be in place. Designing the site Ground Water Sampling Health and Safety Plan will be the responsibility of the party performing the actual work.

In addition, each laboratory facility is responsible for their own standard laboratory health and safety plan as required by current OSHA regulations.

### 2.2 Sample Event Preparation and QA/QC

#### 2.2.1 General Event Preparation

The laboratory performing the ground water analysis shall supply all necessary coolers, pre-cleaned containers, trip blanks, chemical preservatives, packaged refrigerant, labels, custody seals, chain-of-custody and shipping forms. All field data shall be entered on a Field Information Log (see Pages B.1 through ~~B.6~~ in Appendix B) or a similar form. Any changes to the monitoring plan and/or procedures need to be given to the laboratory prior to the field sampling personnel arriving on the site. A specific contact person should be established at both the facility and contract laboratory for communication between the two (2) parties.

#### 2.2.2 Sample Container Selection

Each sample container needs to be constructed of materials compatible and nonreactive with the sample it is to contain. Consult Page B.72 (Appendix B), Recommended Containerization and Preservation of Samples, to determine the number, type and volume of appropriate containers. As noted in Section 2.2.1, the contract laboratory performing the analysis shall supply all the required containers. In circumstances when the facility must obtain its own containers, these containers will be purchased from local container distributors with the exception of septum vials and PTFE (e.g. Teflon®) lined caps

required for organic analyses, which are available from laboratory supply companies. Metal lids shall not be utilized for any sample containers.

### 2.2.3 Sample Container Preparation

Sample containers will be purchased as a pre-cleaned product or cleaned in the laboratory in a manner consistent with EPA protocol. An example protocol is as follows:

- Bottles, vials, cubitainers, liners and caps hand washed in a laboratory-grade, non-phosphate detergent.
- Rinse three (3) times with distilled water.
- Rinse with a chemically pure or reagent grade 10% nitric acid solution.
- Rinse three (3) times with organic-free water.
- Oven-dried (air-dried for high-density polyethylene containers and caps).

After containers and caps are cool and dry, cap each container and store in a clean and dry environment.

### 2.2.4 Equipment Preparation Prior to Site Arrival

~~Dedicated purge and sample devices for the Whispering Pines Landfill are described in Section 2.3.3 and 2.4.3. This section outlines the equipment preparation prior to site arrival for a specific monitoring event. This equipment preparation includes, at a minimum, decontamination procedures for water level indicator(s), and field parameter (temperature, pH, specific conductivity, and turbidity) measurement device(s). Operation and calibration of field instruments will be performed per the manufacturers instructions. pH/temperature meter, specific conductivity meter, and turbidity meter. Operation and calibration information for field instruments are contained in Appendix C.~~

- ~~Water Level Indicator(s) - Water level indicator(s) will be decontaminated prior to initial site arrival by hand washing the sensor probe and entire length of tape in a laboratory grade non-phosphate detergent followed by a triple rinse with organic free water. While the tape is reeled back onto the carrying spool, the tape and probe will be wiped down with a clean dry paper towel. Water level indicator devices will be checked on an annual basis for proper calibration and prior to each monitoring event by reeling a 50' and 100' length of tape on a clean surface and checking the length with a steel measuring tape. Any discrepancies will be noted as a correction factor on the side of the water level indicator reel.~~
- Field Parameter (Temperature, pH, Specific Conductivity, Turbidity) Measuring Device(s) – Field parameter measuring device(s) will be decontaminated by hand washing the sample cells in a laboratory grade non-phosphate detergent followed by a triple rinse with organic free water. Meters will then be checked for proper

calibration and operation as per the manufacturers instructions. Any malfunctioning meters will be replaced prior to packing.

- ~~•pH / Temperature Meter—Meters will be decontaminated by hand washing the sample cells in a laboratory grade non phosphate detergent followed by a triple rinse with organic free water. Meters will then be checked for proper calibration and operation as specified in Appendix C. Any malfunctioning meters will be replaced prior to packing.~~
- ~~•Specific Conductivity Meter—Meters will be decontaminated by hand washing the probes in a laboratory grade non phosphate detergent followed by a triple rinse with organic free water. Meters will then be checked for proper calibration and operation as specified in Appendix C. Any malfunctioning meters will be replaced prior to packing.~~
- ~~•Turbidity Meter—Meters will be decontaminated by hand washing the sample cells in a laboratory grade non phosphate detergent followed by a triple rinse with organic free water. Meters will then be checked for proper calibration and operation as specified in Appendix C. Any malfunctioning meters will be replaced prior to packing.~~

In case of equipment failure, it is recommended that back-up instruments be in the sample crew's possession. If a back-up instrument is not available, then sampling should not proceed until proper equipment is made available.

### 2.2.5 Field OA/QC Samples

Field OA/OC samples consist of two (2) primary areas of quality control. The first area is the quality control designed to prevent sample contamination from occurring in the field and/or shipping procedures. This is monitored in the trip blank(s), field blank(s), and any applicable equipment (rinsate) blank(s). A basic description of each is as follows:

- Trip Blank - These samples will be prepared in the laboratory by filling the appropriate clean sample containers with organic-free water and adding the applicable chemical preservative, if any, as indicated on Page B.72. These containers are to be labeled "Trip Blank", the analyses to be performed on each container indicated, and then shipped in the typical transportation cooler to the field and back to the laboratory along with the other sample set containers for a given event. This blank is tested to detect any contamination that may occur as a result of the containers, sample coolers, cleaning procedures, or chemical preservatives used. Trip blanks will consist of analysis of volatile organics and shall be taken and analyzed for each sampling event at a frequency of one (1) in

twenty (20) per monitoring event or at a minimum of one per event, whichever is greater.

- Field Blank - Field blank containers will be prepared in the field at a routine sample collection point during a monitoring event by filling the appropriate sample containers from the field supply of organic-free water. This field supply water shall be the same water used for cleaning and decontamination of all field purge and sample equipment. This blank is tested to detect contamination that may occur as a result of site ambient air conditions and serves as an additional check for contamination in the containers, sample transport coolers, cleaning procedures, and any chemical preservatives. Field blanks will consist of analysis of volatile organics and shall be taken and analyzed for each sampling event at a frequency of a one (1) in twenty (20) per monitoring event or at a minimum of one per event, whichever is greater.
- Equipment (Rinsate) Blank - These blanks will be prepared in the field immediately following decontamination cleaning procedures on any nondedicated equipment used for purging and sampling. Following decontamination, field supply organic-free water is passed through the nondedicated equipment in the same procedure as a ground water sample. This blank confirms proper field decontamination procedures on non-dedicated equipment utilized in the field. Equipment blanks shall be taken and analyzed for volatile all-applicable parameters anytime non-dedicated equipment is used to purge or sample at a well at a frequency of one (1) in twenty (20) per monitoring event or at a minimum of one per event, whichever is greater.

Other Field QA/QC Samples - A second area of standard field QA/QC samples are field duplicates, matrix spike and matrix spike duplicates.

- Field duplicates are an extra set of samples taken at a particular monitoring point and labeled "Field Duplicate". These are independent samples which are collected as close as possible to the same point in space and time. They are two (2) separate samples taken from the same source, stored in separate containers, and analyzed independently. Field duplicates are useful in documenting the precision of the sampling and analytical process. Samples shall be collected in proper alternating order for the sample point and field duplicate for each parameter (e.g. VOA - VOA, metals - metals, etc.) Field duplicates shall be taken and analyzed at a batch minimum of one (1) in twenty (20) or at a minimum of one (1) per sample event.
- Field samples for matrix spike and matrix spike duplicate analyses are taken in the same manner as field duplicates and allow sufficient volumes of sample to perform matrix spike and matrix spike duplicate analyses.

Matrix spikes are those samples having a known amount of a target analyte added at the lab to the sample prior to sample preparation and analysis. The matrix spike is used to determine the bias of a method in a given sample matrix.

Matrix spike duplicates are intra-laboratory split samples spiked with identical concentrations of target analyte(s). The spiking occurs at the lab prior to sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix. Matrix spike and matrix spike duplicates will be analyzed at an appropriate frequency as specified in the method requirements.

Appropriate field QA/QC documentation should be recorded in the field notes (e.g. location where field blank was collected). See pages B.1—B.6.

## **2.3 Well Purge**

### **2.3.1 General Well Purge Information**

Purging a monitoring well is just as important as the subsequent sampling of the well. Water standing in a monitoring well over a certain period of time may become unrepresentative of formation water because of chemical and biochemical changes which may cause water quality alterations.

### **2.3.2 Water Level Measurement**

Prior to any purge or sampling activity at each monitoring well, a water level measurement is required. ~~As indicated on the Field Information Log (Pages B.1 through B.6), several other water level measurements are to be taken during the course of purge and sampling.~~

Water level indicator equipment will be constructed of chemically inert materials and will be decontaminated at each well with a non-phosphate detergent followed with deionized water rinse. Water levels will be measured with a precision of +/- 0.01 foot.

Each monitoring well has a reference elevation point located at the top of the well head assembly. This reference point elevation ~~has been is~~ measured by a licensed surveyor in relation to Mean Sea Level (MSL). Basic procedures for water level measurement is indicated on Page C.111.

Ground water elevations in wells which monitor the same waste management area must be measured over a period of time short enough to avoid temporal variations in ground water flow which could preclude accurate determination of ground water flow rate and direction.

~~In addition to the static water level, a total well depth is required to be measured at each monitoring well during each ground water monitoring event. Well depth can be taken with a water level indicator device since the probe is heavy enough to keep the tape measure straight and to "feel" the bottom of the well. Total well depth will be measured prior to well purge to reduce the risk of any contamination from the water level probe during sample collection.~~

### 2.3.3 Purge Equipment

Ground water wells will be purged with dedicated, permanently installed variable speed submersible pumps. Parts of the pump contacting the ground water will be constructed of stainless steel and Teflon. These pumps will remain dedicated to each respective well throughout monitoring unless replacement is necessary due to damage or wear, in which case repairs will be completed or a new pump will be dedicated. Purge procedures for dedicated equipment are described in Section 2.3.4.1.

In the event that a dedicated pump is inoperative, the dedicated pump and tubing apparatus will be pulled for replacement or repair and a portable pump or bailer will be used to purge the well. Purge procedures for non-dedicated equipment are described in Section 2.3.4.2.

### 2.3.4 Purge Procedures

~~Prior to purge and immediately after the well head cap is removed, a MSA gascope combustible gas indicator or equivalent device will be used to check each monitoring well for the presence of any methane gas prior to well evacuation. See Appendix C, Pages C.1 CA for calibration and measurement procedures.~~

~~Once the gascope check is completed, the sample crew will put on clean disposable gloves and an initial water level will be taken as described in Section 2.3.2.~~

~~Standard procedures for ground water monitor well purge is as follows:~~

- ~~1. Start the generator (or other power source), electrical voltage to the converter should always be  $\pm 10\%$  of the specified power supply. Generator should be in the downwind direction from the sample point.  
  
(Check power supply with voltmeter for proper voltage range if over or under voltage error appears at converter.)~~
- ~~2. Connect converter lead to well head power plug and plug power cord from converter into generator.~~

