Nursery Products
Planting a Better Tomorrow

December 20, 2010

Harold Singer
Executive Officer
California Regional Water Quality Control Board
14440 Civic Drive, Suite 200
Victorville, CA 92392

Subject: Second Revised Monitoring And Reporting Plan & Sampling and Analysis Plan and Response to Comments
Nursery Products Hawes Composting Facility

Dear Mr. Singer:

On December 8, 2010 Nursery Products received a letter from the California Regional Water Quality Control Board, Lahontan Region (Water Board) requesting clarification in regard to the Monitoring and Reporting & Sampling and Analysis Plan (MRP&SAP) for the Nursery Products Hawes Composting Facility. The December 8th letter commented upon a MRP&SAP submitted almost four months earlier on August 13th. In addition, the August 13th MRP&SAP responded to an earlier letter from the Water Board and that earlier letter failed to raise any of the issues raised in this letter even though the MRP&SAP was unchanged as to the issues addressed in the December 8th letter. The inconsistency in the Water Board's review has resulted in extensive loss of time and added expenses for comments that have only minimal impact on the environment. Nonetheless, this letter and enclosures addresses comments in the Water Board letter with the expectation that the Water Board will not again raise issues that it determines it has missed in earlier reviews.

The Water Board's December 8, 2010 letter included numerous comments regarding the MRP&SAP. These comments are summarized as follows:

1. COMMENT: The requirements and specifications for reporting are not clear.

   RESPONSE: The requirements and specifications for reporting are clearly listed in the reporting section of the MRP&SAP. The MRP&SAP lists quarterly and annual reporting requirements and was copied from the monitoring and reporting program in the Waste Discharge Requirements for the Nursery Products Hawes Composting

Facility. See section 4 of the enclosed second revised MRP&SAP for added clarification.

2. COMMENT: As part of the standard training of operational employees at the site, employees should be trained to look for and know the reporting procedures when they observe operational problems and to document corrective actions.

   RESPONSE: Nursery Products employees responsible for monitoring will be properly trained to use monitoring equipment, and will be familiar with the monitoring system, appropriate corrective action and reporting procedures. For further clarification, see section 3 of the enclosed second revised MRP&SAP.

3. COMMENT: Samples must be collected in appropriate laboratory-supplied containers (liquid and sludge samples) or new sample tubes (soil samples) so as to not undermine the integrity of the samples.

   RESPONSE: The samples will be collected in pre-cleaned, pre-labeled, properly preserved, laboratory-supplied containers. See sections 3.1 through 3.6 of the enclosed second revised MRP&SAP.

4. COMMENT: If a dedicated or disposable sampling method is not used, a blank sample should be collected after decontamination procedures, but before collecting a sample, to ensure quality control of the samples. Furthermore, when collecting water samples for volatile organic compounds (VOC) analyses, a laboratory-supplied trip blank must accompany the samples to the laboratory and be analyzed for VOCs and reported as part of the quality assurance and quality control procedures.

   RESPONSE: If a dedicated or disposable sampling method is not used, a quality control equipment blank (QCEB), will be prepared and collected by the sampling personnel. It will be used to evaluate whether contamination was introduced as a result of improper decontamination of reusable sampling equipment. A QCEB consists of deionized water either poured over or through reusable sampling equipment after decontamination procedures. The QCEB will be collected in and will be shipped along with the samples to the laboratory, and analyzed for the same constituents as the samples. One QCEB will be analyzed for each day that reusable sampling equipment is utilized at the site to facilitate sample collection.

   Where samples are collected for analysis of VOCs, a QCTB, provided by the laboratory, will be used to evaluate whether VOC contamination occurred during

sample transport or storage. A trip blank consists of a deionized water sample transported to the field by sampling personnel, shipped along with the groundwater samples to the laboratory, and analyzed for the same VOCs as the groundwater samples. One QCTB will be analyzed with each sample shipment to the laboratory. See Section 3 of the enclosed second revised MRP&SAP.

5. COMMENT: Sampling frequencies, while specified, are not specific.

   RESPONSE: Quarterly monitoring events will occur during the first week of the second month of the quarter, and annual monitoring events will occur concurrently with the second quarter sampling event each year. See section 3 of the enclosed second revised MRP&SAP.

6. COMMENT: The monitoring well installation section of the MRP&SAP does not include a description for backfilling the annular seal between the top of the transition seal to the ground surface during monitoring well construction.

   RESPONSE: The annular seal will consist of a high-solids bentonite grout (or bentonite chips placed and hydrated in accordance with the above procedure) which will be pumped and placed using a tremie pipe or equivalent to fill the annular space to approximately 5 feet below ground surface. Concrete will be tremied to complete the backfilling of the annual space and be continuous with the minimum 3-foot-diameter surface completion. See section 3.1.1 of the enclosed second revised MRP&SAP.

7. COMMENT: The monitoring well installation section of the MRP&SAP must specify that the California Well Standards for monitoring wells are followed.

   RESPONSE: Installation methods and materials will comply with California State Department of Water Resources Well Standards for monitoring wells. See section 3.1.1 of the enclosed second revised MRP&SAP.

8. COMMENT: The monitoring well installation section of the MRP&SAP states that drill cuttings, drilling fluid, and development water will be collected onsite in containers and properly characterized to determine the proper disposal method. However, the MRP&SAP does not specify what characterization methods will be used nor does it specify which disposal methods will be used for each characterization.

RESPONSE: For characterization of soil for disposal, a minimum of one composite soil sample comprised of approximately equal portions of material from each container will be collected and analyzed for Title 22 metals, Total Petroleum Hydrocarbons (TPH), and Volatile Organic Compounds (VOC) by EPA Methods 6010, 8015, and 8260. Additionally, for characterization of liquids for disposal, a minimum of one composite waste water sample comprised of approximately equal portions of liquid from each container will be analyzed for VOCs by EPA Method 8260 and Title 22 Metals by EPA Method 6010. Soil, fluids, and water determined to be impacted will be disposed of at a licensed landfill or water treatment facility appropriate to the characteristics of the material. Materials determined not to be impacted will be discharged to the ground surface. See section 3.1.1 of the enclosed second revised MRP&SAP.

9. COMMENT: Section 3.1.1, Monitoring Well Installation, of the MRP&SAP describes that during well development, "water quality parameters such as pH, turbidity, specific conductance, and temperature will be monitored," and then describes stabilization limits. However, the MRP&SAP fails to specify a time or frequency of repeated readings at which the well would be considered stabilized.

   RESPONSE: Groundwater data collection will be performed once every 3 minutes. Monitoring wells will be considered developed when temperature stabilizes to within ±1 degree Celsius, when pH stabilizes to within ±0.1 pH unit, and when conductivity stabilizes to within ±3 percent for three consecutive readings. See section 3.1.1 of the enclosed second revised MRP&SAP.

10. COMMENT: Section 3.1.2, Groundwater Monitoring and Sampling, of the MRP&SAP indicates that the wells will be purged of three borehole volumes, and temperature, pH, and conductivity will be monitored during purging to document the flow has stabilized prior to sampling. However, the MRP&SAP fails to specify a time or frequency of repeated readings at which the well would be considered stabilized. Additionally, the disposal of the purge water for groundwater monitoring efforts was not specified.

    RESPONSE: Each well will be purged and sampled using the "purge to stabilization" groundwater sampling technique in general accordance with the Guidance Manual for Groundwater Investigations prepared by the California Environmental Protection Agency (CalEPA), Department of Toxic Substances Control (DTSC), dated July 1995 (revised February 2008). Groundwater data

collection will be performed once every 3 minutes. Monitoring wells will be considered developed when temperature stabilizes to within ±1 degree Celsius, when pH stabilizes to within ±0.1 pH unit, and when conductivity stabilizes to within ±3 percent for three consecutive readings.

Purge water will be containerized onsite pending laboratory analysis. One composite purge water sample comprised of approximately equal portions of water from each container will be analyzed for VOCs by EPA Method 8260 and Title 22 Metals by EPA Method 6010 for disposal characterization purposes. Soil, fluids, and water determined to be impacted will be disposed of at an appropriate licensed landfill or water treatment facility dependent upon the characteristics of the material. Materials determined not to be impacted will be discharged to the ground surface. See section 3.1.2 of the enclosed second revised MRP&SAP.

11. COMMENT: Procedures for determining which locations from the Waste Pile (compost pad) are to be sampled appear to be inconsistent.

    RESPONSE: A Nursery Products employee will select 10 random locations to sample from the most frequently used areas of the waste pile. The locations of the sampling will be compiled on a map to assure sampling will not occur in exactly the same location in the future. Each of the 10 samples will come from a different location on the waste pile and no two samples in an annual sampling event should come from the same one- acre area.

12. COMMENT: The MRP&SAP must specify that individual samples of sludge must be collected from each surface impoundment and each sample must be submitted to and analyzed by the laboratory for the appropriate constituents of concern.

    RESPONSE: Annually, in the second quarter of each year, individual grab samples of the bottom sludge from each surface impoundment, if present, will be collected, and each sample will be analyzed for the constituents listed in Board Order No. R6V-2010-0010. See section 3.4 of the enclosed second revised MRP&SAP.

13. COMMENT: The MRP&SAP must include instructions regarding the decontamination procedures that site sampling personnel will follow to ensure that the shovel, trowel, or scoop used to collect samples is "clean" prior to its use in sample collection.

RESPONSE: A pre-cleaned shovel, trowel, or scoop will be used to collect a representative sample of the sludge in the bottom of each surface impoundment. Re-usable sampling equipment will be decontaminated using an Alconox wash followed by a potable water rinse, followed by a distilled water final rinse (the 3-bucket wash method). See section 3.4 of the enclosed second revised MRP&SAP.

14. COMMENT: The MRP&SAP must include instructions regarding the decontamination procedures that site sampling personnel will follow to ensure that the "pond sampler" apparatus is "clean" prior to its use in sample collection.

    RESPONSE: A pre-cleaned pond sampler (or dipper) that consists of an arm or handle with a clamp to attach a sampling container will be used to collect the representative samples of wastewater. Re-usable sampling equipment will decontaminated using an alconox wash followed by a potable water rinse, followed by a distilled water final rinse (the 3-bucket wash method). See section 3.5 of the enclosed second revised MRP&SAP.

By this letter and the referenced revisions to the second revised MRP&SAP, Nursery Products has fully responded to every comment by the Water Board regarding the MRP&SAP. Per Lynda Brothers' conversation with you, Nursery Products requests a prompt response from the Water Board approving the MRP&SAP. We expect to begin construction of the Hawes Composting Facility in early February. We would appreciate your response by January 12, 2011 especially given the delays associated with each of the Water Board's prior reviews.

If you have any questions please feel free to call me at 760-272-1224.

Sincerely,

Chris Seney, P.E.

Enclosures: Second Revised MRP&SAP

# NURSERY PRODUCTS
# HAWES COMPOST FACILITY
# WDID No. 6B3609903006


## SECOND REVISED Monitoring and Reporting Plan & Sampling and Analysis Plan

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December 2010

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# 1. INTRODUCTION

## 1.1 Terms of Reference

Nursery Products has prepared this Monitoring and Reporting Plan & Sampling and Analysis Plan (MRPSAP) for the Hawes Composting facility (WDID No. 6B3609903006) for two surface impoundments (retention ponds) and one waste pile (compost pad) at the Nursery Products Hawes Composting Facility (Facility).

## 1.2 Overview and Purpose

This document was prepared for Nursery Products in support of the Report of Waste Discharge (ROWD) for the Nursery Products Hawes Composting Facility. This MRPSAP has been prepared in accordance with California Code of Regulations Title 27 and Board Order No. R6V-2010-0010.

# 2. FACILITY OVERVIEW

## 2.1 Project Description

The Facility is a biosolids and green material composting facility located on approximately 80 acres of a 160-acre parcel located within an unincorporated area of San Bernardino County. The facility will recycle biosolids and green material to produce agricultural grade compost in compliance with U.S. Environmental Protection Agency (EPA) Code of Federal Regulations (CFR), Title 40, Chapter 1, Part 503 and the California Code of Regulations (CCR) Title 14.

Two surface impoundments, located on the northern end of the Facility, will collect storm water. The surface impoundments are designed to collect all storm water from the 100-year, 24-hour storm event over the entire facility and the 1,000-year, 24-hour storm event that falls directly on the surface impoundments.

The waste pile (compost pad) is located beneath the composting area and consists of prepared subgrade of no less than 12 inches of engineered fill derived from native material. The engineered pad is sloped to prevent ponding such that all storm water will flow to the surface impoundments. The Facility will contain all storm water from the 1,000-year, 24-hour storm event that falls on the site.

# 3. ENVIRONMENTAL CONTROL AND MONITORING SYSTEMS

This section presents a description of the environmental controls and monitoring systems at the Facility in accordance with CCR Title 27. Monitoring frequency of each system will be performed in accordance with the Lahontan Regional Water Quality Control Board (RWQCB) Monitoring and Reporting Program No. R6V-2010-0010 (MRP) for the Facility. Quarterly monitoring events will occur during the first week of the second month of the quarter, and annual monitoring events will occur concurrently with the second quarter sampling event (i.e. May) each year.

Nursery Products employees responsible for monitoring will be properly trained to use Monitoring equipment, and will be familiar with the monitoring system, appropriate corrective action and reporting procedures. Documentation of all monitoring activities, any corrective action taken, and

RWQCB notifications will be summarized in the monitoring reports, consistent with the requirements included in the MRP.

## 3.1. Groundwater Monitoring System

Monitoring well locations were identified so that water quality data can be collected up gradient (MW-1) and down gradient (MW-2 and MW-3) of the two surface impoundments and waste pile. The monitoring well locations are shown on the figures provided in Appendix A. The specific locations of the wells were selected because based on all available data groundwater flows northward (see ROWD). Additional groundwater wells may be necessary to characterize the groundwater beneath the facility. Following installation of the monitoring wells, site-specific groundwater flow direction will be confirmed using groundwater elevation data from the wells. The list of parameters can be found in Board Order No. R6V-2010-0010. The samples, with the exception of field parameters, will be analyzed by a California state-certified laboratory. Initially, the wells will also be sampled quarterly for at least eight quarters to characterize background water quality and flow conditions.

### 3.1.1 Monitoring Well Installation

Prior to drilling, Underground Service Alert (USA) will be contacted at least 48 hours in advance of drilling to notify operators of subsurface utilities of our intention to drill as required by law. The utility companies will conduct a mark-out of any utilities in the vicinity of the proposed drilling. In addition, well permits will be obtained from San Bernardino County, Department of Environmental Health.

The monitoring wells will be installed using either air-rotary or sonic drilling by a state-licensed drilling contractor. Installation methods and materials will comply with California State Department of Water Resources Well Standards for monitoring wells (DWR Bulletin Nos. 74-81 and 74-90) that are described in the sections below.

The field engineer/geologist will inventory the well construction materials prior to the start of well construction. Drill cuttings, drilling fluid, and development water will be collected onsite in containers pending laboratory analysis. Samples of investigative-derived material will be collected in pre-cleaned, properly preserved, laboratory-provided containers and analyzed. For characterization of soil for disposal, a minimum of one composite soil sample comprised of approximately equal portions of material from each container will be collected and analyzed for Title 22 metals, Total Petroleum Hydrocarbons (TPH), and Volatile Organic Compounds (VOC) by EPA Methods 6010, 8015, and 8260. Additionally, for characterization of liquids for disposal, a minimum of one composite waste water sample comprised of approximately equal portions of liquid from each container will be analyzed for VOCs by EPA Method 8260 and Title 22 Metals by EPA Method 6010. Soil, fluids, and water determined to be impacted will be disposed of at a licensed landfill or water treatment facility appropriate to the characteristics of the material. Materials determined not to be impacted will be discharged to the ground surface.

Monitoring wells will be constructed from materials specified herein. Well materials shall be new and clean, and soiled materials will be cleaned prior to use, and decontaminated if there is a potential that well materials have contacted contaminated surfaces. The well casing will consist of threaded, Schedule 80 PVC, four-inch-diameter pipe. The well screen will consist of threaded, machine-slotted Schedule 80 PVC pipe (0.020–inch slots) with a threaded PVC end cap. Stainless steel centralizers

will be used, at 30-foot intervals. The bottom 30 feet of each well is proposed to provide the screened interval, and the well will be set so that approximately 20 feet of the 30 feet of screen will lie below the level of groundwater. The annular space will be backfilled with a Monterey #3 sand filter pack to a level of approximately 5 feet above the top of the well screen using a tremie pipe. The level of the sand will be periodically sounded to identify its depth and the water in the well will be surged so that the filter pack will settle.

A minimum 5-foot transition seal will be tremied into place through the conductor casing and will consist of bentonite chips, placed in 6-inch lifts followed by hydration using approximately 1 gallon of potable water (unless prohibited by well conditions). The completed bentonite transition seal will be allowed to hydrate for at least 30 minutes prior to placing the grout. The depth to the top of the transition seal will be verified by measuring using a weighted tape.

The annular seal will consist of a high-solids bentonite grout (or bentonite chips placed and hydrated in accordance with the above procedure) which will be pumped and placed using a tremie pipe or equivalent to fill the annular space to approximately 5 feet below ground surface. Concrete will be tremied to complete the backfilling of the annual space and be continuous with the minimum 3-foot-diameter surface completion.

Upon completion of the well, the riser pipe will be cut cleanly so that the top of the well is level, and a mark or notch made on the top of the riser pipe identifying a measuring point for water level measurements. A locking cap will be placed at the top of the casing to secure the well from unauthorized entry. A traffic-rated, flush-mount well box will be completed at the ground surface.

After completion of well installation, the drilling contractor will perform well development by airlifting/swabbing, and pumping or other methods to remove residual drilling solids. Water will be pumped from the well until the discharge is relatively free of fine-grained sediment prior to collecting groundwater field parameters including temperature, pH, and conductivity. To facilitate groundwater parameter data collection, a groundwater quality meter (such as YSI 556 or equivalent) and flow-through cell will be fitted to a valve on the effluent of the pump so as to allow non-turbulent flow through the cell. Groundwater quality meters will be calibrated prior to use, and documentation of calibration will be retained.

Groundwater data collection will be performed once every 3 minutes. Monitoring wells will be considered developed when temperature stabilizes to within ±1 degree Celsius, when pH stabilizes to within ±0.1 pH unit, and when conductivity stabilizes to within ±3 percent for three consecutive readings. Additionally, depth to water data will be collected using an electronic water-level indicator.

A boring log showing the well construction/completion for each well will be completed in the field by the field geologist/engineer under the supervision of a California Professional Geologist or Engineer. Well installation and construction data will be summarized in the log book. Well development notes and field measurements of water quality parameters will be summarized on corresponding well development and purging forms.

Following the completion of well installation, wells will be surveyed by a professional land surveyor licensed in the state of California, and in accordance with the California State Plane coordinate system

and appropriate vertical datum. Groundwater levels will be measured post-installation to evaluate the groundwater flow direction.

### 3.1.2 Groundwater Monitoring and Sampling

Groundwater monitoring, sampling, and analysis will be conducted on a quarterly basis. Prior to purging, the water level in each well will be measured using an electronic water-level indicator to the nearest 0.01 foot. Each well will be purged and sampled using the "purge to stabilization" groundwater sampling technique in general accordance with the Guidance Manual for Groundwater Investigations prepared by the California Environmental Protection Agency (CalEPA), Department of Toxic Substances Control (DTSC), dated July 1995 (revised February 2008). Groundwater purging will be performed using either a dedicated or non-dedicated variable-speed pump set within the screened interval with a pump rate set such that drawdown is minimized. During purging, water level measurements must be taken regularly at 3-minute intervals to document the amount of drawdown during purging. After a minimum of one tubing volume (including pump and flow-through-cell volume) has been purged from the well, field parameters (including temperature, pH, and conductivity) will be monitored at a frequency of every 3 minutes to document the stability of these parameters before sampling. Well water will be considered stabilized when temperature stabilizes to within ±1 degree Celsius, when pH stabilizes to within ±0.1 pH unit, and when conductivity stabilizes to within ±3 percent for three consecutive readings. To facilitate groundwater field parameter data collection, a groundwater quality meter (such as YSI 556 or equivalent) and flow-through-cell will be fitted to a valve on the effluent of the pump so as to allow non-turbulent flow through the cell. Groundwater quality meters will be calibrated prior to use, and documentation of calibration will be retained. Subsequent to confirmation of stabilization of field parameters, groundwater shall be sampled directly from the discharge hose by slowing the pumping rate to a thin, slowly flowing stream and filling the appropriate sample containers. The sample containers will be pre-cleaned, pre labeled, properly preserved laboratory-supplied containers appropriate for each analyte.

Purge water will be containerized onsite pending laboratory analysis. One composite purge water sample comprised of approximately equal portions of water from each container will be analyzed for VOCs by EPA Method 8260 and Title 22 Metals by EPA Method 6010 for disposal characterization purposes. Soil, fluids, and water determined to be impacted will be disposed of at an appropriate licensed landfill or water treatment facility dependent upon the characteristics of the material. Materials determined not to be impacted will be discharged to the ground surface.

Water samples will be collected using disposable or dedicated tubing. Therefore, no rinsate blank will be collected for analysis when sampling the wells. However, when samples are collected for analysis of VOCs, a quality control trip blank (QCTB), provided by the laboratory, will be used to evaluate if VOC contamination occurred during sample transport or storage. A trip blank consists of a deionized water sample transported to the field by sampling personnel, shipped along with the groundwater samples to the laboratory, and analyzed for the same VOCs as the groundwater samples. One QCTB will be analyzed with each sample shipment to the laboratory. A Nursery Products employee will notify the laboratory in advance of groundwater sampling to arrange for the laboratory to be onsite to pick up the samples using proper sample preservation, containers, handling and storage. The Nursery Products employee will complete a chain of custody and make a copy for internal records. The laboratory will transport the samples and chain of custody to the laboratory for analysis. Analyses listed in Board Order No. R6V-2010-0010 will be performed in accordance with recommended holding times, containers, and preservatives by a state-certified laboratory.

## 3.2. Vadose (Unsaturated) Zone Monitoring - Surface Impoundments

The vadose zone monitoring system beneath each surface impoundment will consist of a permanent lysimeter. The lysimeter will consist of 60-mil HDPE. The dimensions of each lysimeter sump will be 25 feet square, 2 feet deep and be filled with crushed rock. Each lysimeter sump will be located with the top being 5 feet below the bottom of the surface impoundment. Access to the lysimeter is through a 6-inch riser pipe that will have a locking cover.

The particular locations of the monitoring points were selected based upon the surface impoundment design which already contains a LDMS located at the lowest spot of the surface impoundment.

Each lysimeter will be inspected weekly by a Nursery Products employee for the presence of liquids using an electronic moisture detector. Detection of leachate in a previously dry lysimeter requires immediate notification of the RWQCB and testing for parameters in Attachment B of Board Order No. R6V-2010-0010. A Nursery Products employee will notify the laboratory that surface impoundment vadose zone samples are going to be taken and arrange for the laboratory to pick up the samples using proper sample preservation, containers, handling and storage. The Nursery Products employee will obtain the samples using pre-cleaned onsite portable pumping equipment. Re-usable sampling equipment will be decontaminated using an Alconox wash followed by a potable water rinse, followed by a distilled water final rinse (the 3-bucket wash method). The samples will be collected in pre-cleaned, pre-labeled, properly preserved, laboratory-supplied containers appropriate for each analyte. In addition to the surface impoundment vadose zone samples, a quality control equipment blank (QCEB), will be prepared and collected by the sampling personnel. It will be used to evaluate whether contamination was introduced as a result of improper decontamination of reusable sampling equipment. A QCEB consists of deionized water either poured over or through reusable sampling equipment after decontamination procedures. The QCEB will be collected in and will be shipped along with the groundwater samples to the laboratory, and analyzed for the same constituents as the leachate samples. One QCEB will be analyzed for each day that reusable groundwater sampling equipment is utilized at the site to facilitate sample collection.

Where samples are collected for analysis of VOCs, a QCTB, provided by the laboratory, will be used to evaluate whether VOC contamination occurred during sample transport or storage. A trip blank consists of a deionized water sample transported to the field by sampling personnel, shipped along with the groundwater samples to the laboratory, and analyzed for the same VOCs as the groundwater samples. One QCTB will be analyzed with each sample shipment to the laboratory. The Nursery Products employee will complete a chain of custody and make a copy for internal records.

## 3.3. Vadose (Unsaturated) Zone Monitoring - Waste Pile (Compost Pad)

The vadose zone soil monitoring beneath the waste pile will be conducted annually. Specific parameters will be tested annually and the constituents of concern will be tested on a five year cycle. Ten soil samples from within the native engineered fill of the waste pile will be collected at six-inch intervals to depth of 1.5 feet beneath the waste pile. The samples collected from the 6-inch intervals will be sent to the laboratory under chain-of-custody procedures for analyses appearing in Board Order No. R6V-2010-0010. If the results of those analyses indicate a measurably significant release using statistical analysis then the 12-inch interval samples must be analyzed for the specific constituents that indicated the possibility of a release. If the results of those analyses indicate a measurably significant release using statistical analysis then notification procedures will be followed and measures will be

taken to repair or replace the composting pad and remediate the release. All samples, with the exception of field parameters, will be analyzed by a state-certified laboratory.

A Nursery Products employee will notify the laboratory in advance of the vadose zone monitoring of the waste pile and arrange for the laboratory to pick up the samples using proper sample preservation, containers, handling and storage. A Nursery Products employee will select 10 random locations to sample from the most frequently used areas of the waste pile. The locations of the sampling will be compiled on a map to assure sampling will not occur in exactly the same location in the future. Each of the 10 samples will come from a different location on the waste pile and no two samples in an annual sampling event should come from the same one-acre area. A clean hand auger or sample tube will be used to retrieve the representative samples. Re-usable sampling equipment will be decontaminated using an Alconox wash followed by a potable water rinse, followed by a distilled water final rinse (the 3-bucket wash method). The samples will be taken to a depth of 18 inches. The hand auger samples will be collected in pre-cleaned, pre-labeled, properly preserved laboratory supplied containers. Soil samples retrieved with sampling tubes will be sealed and will not be transferred into other containers. In addition to the waste pile samples, a quality control equipment blank (QCEB), will be prepared and collected by the sampling personnel. It will be used to evaluate whether contamination was introduced as a result of improper decontamination of reusable sampling equipment. A QCEB consists of deionized water either poured over or through reusable sampling equipment after decontamination procedures. The QCEB will be collected in and will be shipped along with the groundwater samples to the laboratory, and analyzed for the same constituents as the waste pile samples. One QCEB will be analyzed for each day that reusable sampling equipment is utilized at the site to facilitate sample collection. A QCEB will not be prepared if new disposable sampling equipment is used to collect a representative sample. Following sample collection, the void space will be backfilled with bentonite and compacted. The Nursery Products employee will complete a chain of custody and make a copy for internal records.

Background native soil data was submitted to the RWQCB on August 24, 2010 as required in Board Order No. R6V-2010-0010.

### 3.4. Sludge Monitoring

Annually, in the last quarter of each year, individual grab samples of the bottom sludge from each surface impoundment, if present, will be collected, and each sample will be analyzed for the constituents listed in Board Order No. R6V-2010-0010. A Nursery Products employee will notify the laboratory in advance that sludge samples are going to be taken and arrange for the laboratory to pick up the samples using proper sample preservation, containers, handling and storage. The Nursery Products employee, with sterile boot covers will climb down into each surface impoundment to obtain the samples. A pre-cleaned shovel, trowel, or scoop will be used to collect a representative sample of the sludge in the bottom of each surface impoundment. Re-usable sampling equipment will decontaminated using an Alconox wash followed by a potable water rinse, followed by a distilled water final rinse (the 3-bucket wash method). In addition to the sludge samples, a quality control equipment blank (QCEB), will be prepared and collected by the sampling personnel. It will be used to evaluate whether contamination was introduced as a result of improper decontamination of reusable sampling equipment. A QCEB consists of deionized water either poured over or through reusable sampling equipment after decontamination procedures. The QCEB will be collected in and will be shipped along with the sludge samples to the laboratory, and analyzed for the same constituents as the sludge samples. One QCEB will be analyzed for each day that reusable sludge sampling equipment is

utilized at the site to facilitate sample collection. A QCEB will not be prepared if a new disposable shovel, trowel, or scoop is used to collect a representative sample of the sludge in the bottom of each surface impoundment. The representative samples will be placed into the pre-labeled container provided by the laboratory. The Nursery Products employee will complete a chain of custody and make a copy for internal records.

### 3.5. Wastewater Monitoring

Quarterly, a minimum of three liquid grab samples from each of the surface impoundments will be collected from a depth of approximately one foot, opposite the inlet, in a quiescent surface area. The grab samples from each surface impoundment may be composited by the laboratory into two samples, one for each surface impoundment. The samples will be analyzed for the monitoring parameters in Board Order No. R6V-2010-0010. If the surface impoundment is dry at the time of monitoring, this condition will be noted in the monitoring report. A Nursery Products employee will notify the laboratory in advance that wastewater samples are going to be taken and arrange for the laboratory to be onsite to pick up the samples using proper sample preservation, containers, handling and storage. The Nursery Products employee will obtain the samples. A pre-cleaned pond sampler (or dipper) that consists of an arm or handle with a clamp to attach a sampling container will be used to collect the representative samples of wastewater. Re-usable sampling equipment will decontaminated using an Alconox wash followed by a potable water rinse, followed by a distilled water final rinse (the 3-bucket wash method). The pond sampler will be slowly submerged and retrieve the samples with minimal surface disturbance. The samples will be collected in pre-cleaned, pre-labeled, properly preserved laboratory supplied containers. In addition to the liquid grab samples, a quality control equipment blank (QCEB), will be prepared and collected by the sampling personnel. It will be used to evaluate whether contamination was introduced as a result of improper decontamination of reusable sampling equipment. A QCEB consists of deionized water either poured over or through reusable sampling equipment after decontamination procedures. The QCEB will be collected in and will be shipped along with the liquid grab samples to the laboratory, and analyzed for the same constituents as the liquid samples. One QCEB will be analyzed for each day that reusable groundwater sampling equipment is utilized at the site to facilitate sample collection. A QCEB will not be prepared if a new disposable pond sampler is used to collect the representative sample. The representative samples will be placed in to the pre labeled container provided by the laboratory. The laboratory will composite the three samples for each surface impoundment. The Nursery Products employee will complete a chain of custody and make a copy for internal records.

Where samples are collected for analysis of VOCs, a QCTB will be provided by the laboratory to evaluate whether VOC contamination occurred during sample transport or storage. A trip blank consists of a deionized water sample transported to the field by sampling personnel, shipped along with the groundwater samples to the laboratory, and analyzed for the same VOCs as the groundwater samples. One QCTB will be analyzed with each sample shipment to the laboratory.

### 3.6. Leak Detection Monitoring Sump (LDMS)

Weekly inspection for liquid in each of the two LDMS will be conducted by a Nursery Products employee using a moisture detector. Access to the LDMS is through a 6-inch riser pipe that will have a locking cover. The result of these inspections will be recorded in a permanent logbook kept onsite. If liquid is detected in a LDMS, the RWQCB will be notified immediately. Any volume of liquid

pumped out of the LDMS will be recorded along with date, time, and discharge location, in a permanent logbook kept on site.

Upon detection of leachate in a previously dry LDMS, a grab sample will be collected and tested for the parameters listed in Board Order No. R6V-2010-0010. A Nursery Products employee will notify the laboratory in advance that LDMS samples are going to be taken and arrange for the laboratory to be onsite to pick up the samples using proper sample preservation, containers, handling and storage. The Nursery Products employee will obtain the samples using pre cleaned onsite portable pumping equipment. The samples will be collected in pre-cleaned, pre-labeled, properly preserved laboratory-supplied containers appropriate for each analyte. The Nursery Products employee will complete a chain of custody and make a copy for internal records.

Re-usable sampling equipment will be decontaminated using an Alconox wash followed by a potable water rinse, followed by a distilled water final rinse (the 3-bucket wash method). A quality control equipment blank (QCEB) will be prepared and collected by the sampling personnel. It will be used to evaluate whether contamination was introduced as a result of improper decontamination of reusable groundwater sampling equipment. A QCEB consists of deionized water either poured over or through reusable sampling equipment after decontamination procedures or collected appropriately preserved and labeled containers. The QCEB is shipped along with the groundwater samples to the laboratory, and analyzed for the same constituents as the leachate samples. One QCEB will be analyzed for each day that reusable groundwater sampling equipment is utilized at the site to facilitate sample collection.

Where samples are collected for analysis of VOCs, a QCTB, provided by the laboratory, will be used to evaluate whether VOC contamination occurred during sample transport or storage. A trip blank consists of a deionized water sample transported to the field by sampling personnel, shipped along with the groundwater samples to the laboratory, and analyzed for the same VOCs as the groundwater samples. One QCTB will be analyzed with each sample shipment to the laboratory.

### 3.7. Dikes & Liners

Monthly, each of the surface impoundment dikes and liners will be visually inspected to determine if there are any indications of loss of integrity. Should the inspection indicate that any unauthorized discharge has occurred, or may occur; the Water Board will be notified within 48 hours, followed by confirmation in writing within 7 days.

Daily, measure and record the freeboard, as measured from the top of the lowest part of the dike to the wastewater surface in each surface impoundment. Observations and measurements will be recorded in a permanent log book kept onsite. If the surface impoundment is dry, then indicate that it is dry in the log book and monitoring report.

The weather forecasts will be monitored daily and whenever rain is forecast. Each surface impoundment will be inspected and documented prior to each predicted event.

### 3.8. Facility Storm Water Berm

Monthly, and before, during, and after any storm event that produces precipitation at the Facility, the berm around the Facility will be visually inspected to determine if there are any indications of loss of integrity. Inspections, inspection results, and activities performed to correct deficiencies must be

documented. Should the inspection indicate that any unauthorized discharge has occurred, or may occur; the Water Board must be notified within 48 hours, followed by confirmation in writing within 7 days.

### 3.9. Facility Odor Monitoring

An Odor Impact Minimization Plan has been developed. Daily, the discharger will assess the site conditions and evaluate potential sources of objectionable odors and document these inspections. Documentation will include a description of any odors detected. Wind speed and direction will be checked and logged daily and just prior to any activities at the Facility that may produce nuisance dust. Odor control measures include odor screening and load checking procedures; feedstock storage and processing measures; windrow management measures, good housekeeping procedures; and an odor complaint response system. Odor control activities at the Facility must be documented daily in a permanent log book kept on site.

### 3.10. Operation and Maintenance

A brief summary of any operational problems and maintenance activities must be submitted to the Water Board with each monitoring report.

### 3.11. Dust Control

The following mitigation measures must be implemented and monitored to ensure dust is controlled:

- Unpaved roads will be watered, as necessary, to minimize visible dust. Alternatively, roads may be paved;
- During episodes of high winds (>30 miles per hour) activities that may create nuisance dust may not be performed;
- Daily, monitor moisture content of windrows using a standard field test for moisture. Moisture will be determined by taking a representative sample of the windrow materials and forming the material into a ball by hand; the materials should hold together without crumbling. If material crumbles, water will be added. Moisture monitoring activities must be documented daily in a permanent log book on site.

## 4. REPORTING

### 4.1 Monitoring Reports

In accordance with Section IV "Monitoring Requirements" of the MRP, monitoring reports will be submitted quarterly on the 30$^{th}$ day of the month following each quarter. Annual monitoring reports will be submitted no later than April 30 of each year. Every five years there will be sampling for non-monitoring parameter Constituents of Concern (COCs) with successive direct monitoring efforts being carried out alternatively during January 1 through June 30 of one five-year sampling event and July 1 through December 31 of the next five year sampling event, and every fifth year, thereafter. The first five year non-monitoring parameter COC sampling event must take place during January 1 through June 30 of the second year of operation, and reported no later than 45 days following the monitoring period.

The quarterly monitoring reports, at a minimum, will contain the following components:

- Results of sampling and laboratory analyses for each groundwater monitoring point, including statistical limits for each monitoring parameter and an identification of each sample that exceeds its respective statistical limit at any given monitoring point in accordance with Section III "Data Analyses" of the MRP;

- A description and graphical representation of the velocity and direction of groundwater flow under/around the facility, based on water-level elevations taken during the collection of the water quality data submitted in the report;

- Results (including chains of custody) of any sampling and laboratory analyses conducted at the facility as required by this MRP&SAP;

- Summary of any operational problems and maintenance activities;

- A map and/or aerial photograph showing the locations of the observation stations, monitoring points, background monitoring points, and the Points of Compliance (POCs) along the downgradient boundary of the facility;

- Surface Impoundments monitoring results, including an evaluation of the effectiveness of the leachate monitoring and control facilities. Monitoring will include a summary of Surface Impoundment pumping activities for dust control mitigation measures;

- A summary of all monitoring of the surface impoundment dikes and liners, and freeboard measurements;

- If the Storm Contingency Plan is implemented during a quarter, the volume of liquid removed and the location the liquid was taken to for disposal will be provided, documentation will include the beginning and ending freeboard levels;

- Monitoring of the Facility Berm including an evaluation of the effectiveness of the run-on/runoff control facilities;

- A summary of all monitoring and sampling of the lysimeter and LDMS systems;

- A summary of all monitoring and sampling of the waste pile including sampling locations;

- Data collected in accordance with the MRPSAP, and the MRP for the surface impoundments' unsaturated zone monitoring system and groundwater monitoring wells;

- An assessment of odor impacts in accordance with the approved Odor Impact Minimization Plan, and mitigation measures implemented for nuisance odor control;

- A summary of all daily wind monitoring data in tabular form, with wind speeds in excess of 30 miles per hour highlighted in the table;

- A summary of moisture monitoring measures for windrows, including any instances where water had to be added to the windrow;

- A letter transmitting the essential points of each report, including a discussion of any violations found since the last such monitoring report was submitted, and describing actions taken or planned for correcting these violations; and

- A reference to any previously submitted time schedule for correcting identified violations. If no violations occurred since the last report submittal, this will also be stated in the transmittal letter.

Annual Monitoring Reports will include, at a minimum, the following components:

- A list of all monitoring point/monitoring parameter (MPt/MPar) pairs, by medium, that have exhibited a verified measurably significant increase, together with the respective date (for each) when that increase occurred. Any MPt/MPar pairs that have shown an increase within that (prior) year will be bolded-and-underlined. In addition, by medium, list any non-monitoring parameter constituents of concern (COCs) that, during the testing year (tested every 5-years), have exceeded their respective statistical limit and, as a result, have become monitoring parameters, together with the date when the transition occurred;

- Time-series data plots of groundwater and soil moisture analysis. Time series plots will include appropriate MCL or concentration thresholds established for each respective constituent that has shown a verified increase. For a pair that has a verified release indication, these plots must also include the cleanup goal;

- Four maps, one for each quarter of the last reporting year, showing the groundwater elevation isocontours determined for that quarter, and showing the Waste Pile and Surface Impoundments perimeters and the groundwater monitoring point and background monitoring point locations for each waste management unit, and including the surface trace of the facility's point of compliance;

- Graphical and tabular data for the monitoring data obtained for the previous calendar year (January through December). Each table will summarize the historical and most recently detected constituents concentrations for all locations sampled, and compare these data to both the given monitoring point/COC pair's respective statistical limit and (if applicable) and MCL, and be labeled appropriately. Each such graph will be plotted using raw data, and at a scale appropriate to show trends or variations in water quality. For graphs showing trends of similar constituents (e.g., VOCs), the scale must be the same;

- Calibration methods and any discrepancies of any meters used for field parameter evaluations after calibration is performed;

- The compliance record and any corrective actions taken or which may be planned to bring the discharge into full compliance with the discharge requirements;

- Evidence that adequate financial assurance for closure and corrective actions for all known or reasonably foreseeable releases is still in effect. Evidence may include a copy of the renewed

financial instrument or a copy of the receipt for payment of the financial instrument. Evidence of adequate financial assurance must be signed by the Corporate Officer;

- Evidence that the financial assurance amount is adequate or increase the amount of financial assurance by an appropriate amount if necessary, due to inflation, a change in the approved closure plan, or other unforeseen events; and

- Any known or reasonably foreseeable releases causing significant changes in the operation of the facility will prompt the review of the preliminary closure plan and corrective action plan to evaluate whether updates to the plans are warranted. Any changes to these plans will be submitted to the RWQCB in the annual report.

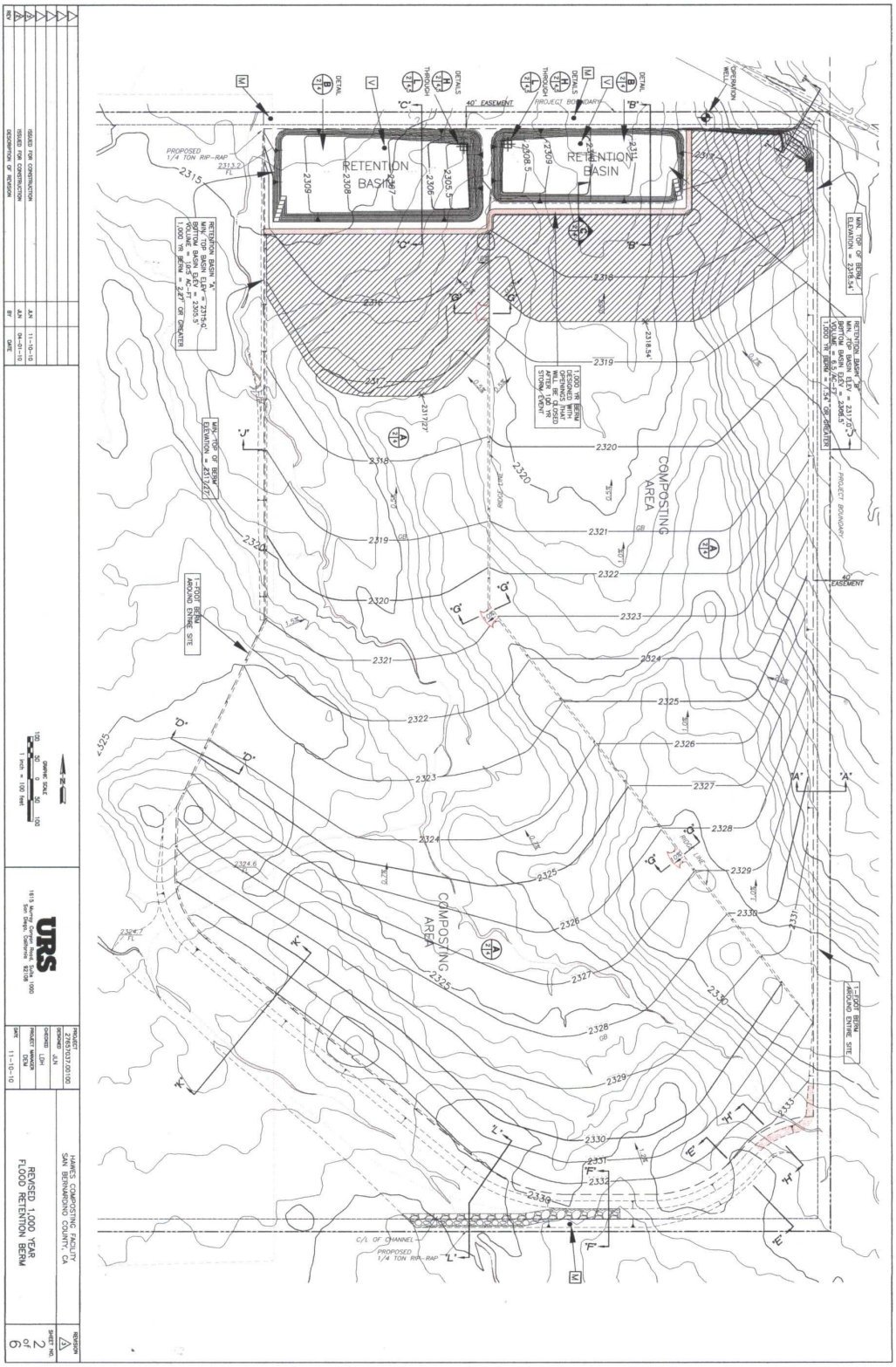
## 4.2 Technical Reports

No later than 90 days following completion of construction, a technical report will be submitted discussing the installation of the monitoring system. No later than 760 days following the beginning of operations, a proposed data analysis method and a proposed concentration limit (background data set) consisting of eight data points will be submitted. This report must be certified by a registered Civil Engineer.

# 5. CERTIFICATION

I certify under penalty of perjury that I have personally examined and am familiar with the information submitted in this Monitoring and Reporting Plan & Sampling and Analysis Plan for the Nursery Products Hawes Composting Facility and all attachments and, based on my inquiry of those individuals immediately responsible for obtaining the information; I believe the information is true, accurate, and complete. My seal as a registered professional engineer licensed in the State of California is affixed below.

# APPENDIX A


RETENTION BASIN
RETENTION BASIN
COMPOSTING AREA
COMPOSTING AREA
40' EASEMENT
PROJECT BOUNDARY
PROPOSED 1/4 TON RIP-RAP
C/L OF CHANNEL
PROPOSED 1/4 TON RIP-RAP
1-FOOT BERM AROUND ENTIRE SITE
1-FOOT BERM AROUND ENTIRE SITE
MIN. TOP OF BERM ELEVATION = 2316.54'
MIN. TOP OF BERM ELEVATION = 2317.65'
RETENTION BASIN "A" MIN. TOP BASIN ELEV. = 2313.82' BOTTOM BASIN ELEV. = 2305.5' VOLUME = 18.5 AC-FT 1,000 YR BERM = 2.47' OR GREATER
RETENTION BASIN "B" MIN. TOP BASIN ELEV. = 2317.65' BOTTOM BASIN ELEV. = 2308.5' VOLUME = 8.5 AC-FT 1,000 YR BERM = 1.54' OR GREATER
1,000 YR BERM REQUIRED OPENINGS THAT WILL BE CLOSED AFTER 100 YR STORM EVENT
DETAIL
THROUGH
DETAILS
OPERATION WELL
SCALE
100 50 0 50 100
1 inch = 100 feet
URS
1615 Murray Canyon Road, Suite 1000
San Diego, California 92108
HAMES COMPOSTING FACILITY
SAN BERNARDINO COUNTY, CA
REVISED 1,000 YEAR FLOOD RETENTION BERM
PROJECT 27653037.00100
DESIGNED AJH
DRAWN LDH
CHECKED AJH
PROJECT MANAGER STEVE
DATE 11-10-10
SHEET NO. 2 of 6
REVISION
ISSUED FOR CONSTRUCTION 11-10-10 AJH
ISSUED FOR CONSTRUCTION 04-01-10 AJH
DESCRIPTION OF REVISION BY DATE
REV