Nursery Products
Planting a Better Tomorrow

August 11, 2010

Brianna Bergen
California Regional Water Quality Control Board
14440 Civic Drive, Suite 200
Victorville, CA 92392

Subject: Addendum to Design Plan, CQA Plan & Technical Specifications
Nursery Products Hawes Composting Facility
San Bernardino County, California

Dear Ms Bergen:

Nursery Products is pleased to submit this letter addendum to the Design Plan, CQA Plan & Technical Specifications (Plan) for the Hawes Composting Facility (Facility) in San Bernardino County, California. This addendum supplements and supersedes the Plan prepared by Nursery Products dated May 5, 2010. This addendum has been prepared for submittal to the Lahontan Regional Water Quality Control Board (RWQCB) and includes the revised pages as attachments.

If you have any questions concerning this addendum, please feel free to call.

Sincerely,

Chris Seney, P.E.

Nursery Products

Enclosures: Revised Plan – Section 3
Revised Drawing
Revised Hydrology Report

3. FACILITY DESIGN PLAN

The perimeter berms, composting pad, surface impoundments and perimeter drainage structures, are the primary engineered structures at the facility. These structures were designed to have a foundation capable of providing support for the structures, and capable of withstanding hydraulic pressure gradients to prevent failure due to settlement, compression, uplift, and effects of earthquake-induced ground motions.

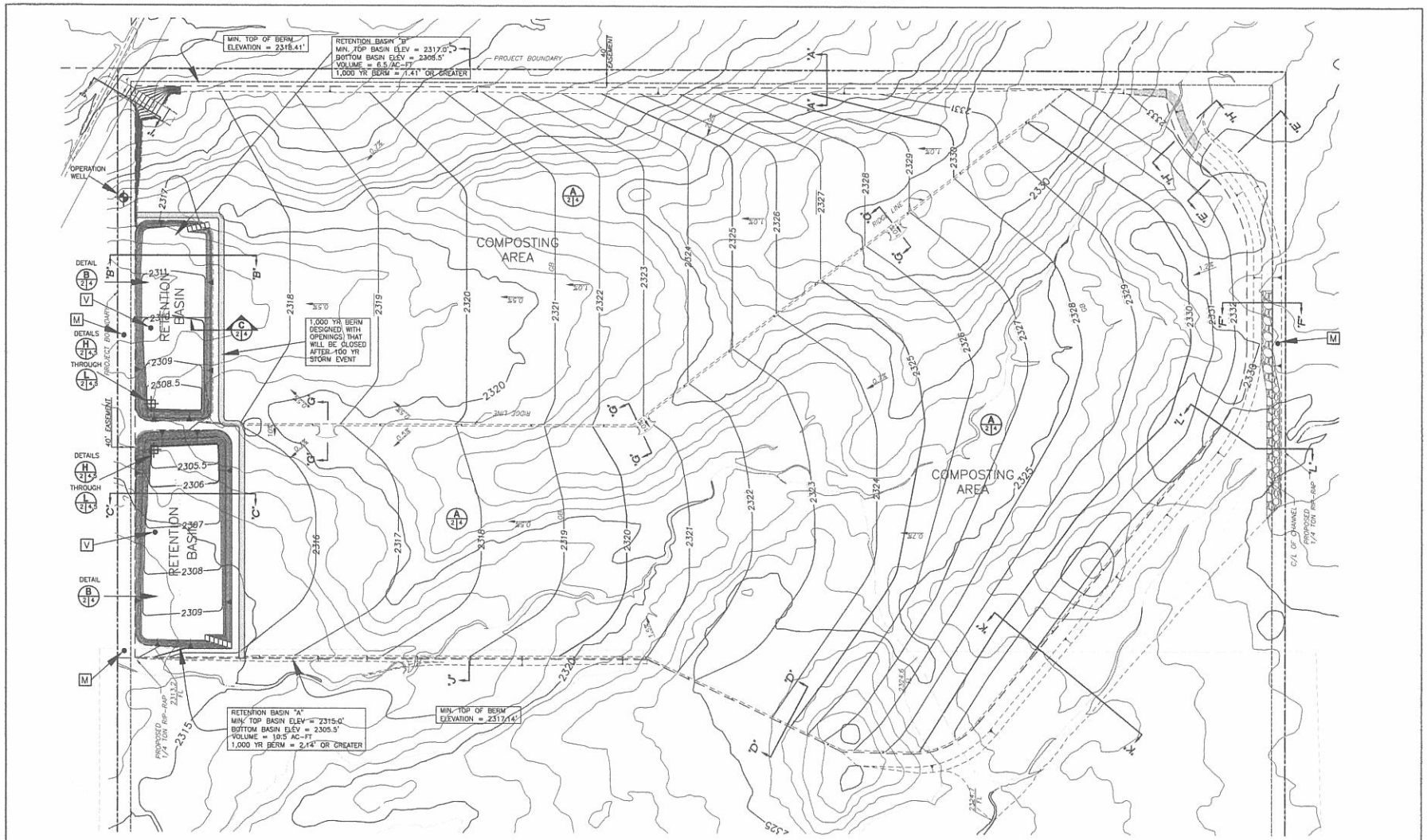
3.1 Waste Pile Design

The grading design was prepared by AEI CASC Consulting (Appendix A). The grading was designed to minimize the amount of earthwork required to construct the site while meeting the engineering objectives of storm water run-on, runoff control, erosion protection, and minimizing storm water infiltration. Varying sizes of berms with side slopes of 2:1 (horizontal:vertical) are located around the perimeter of the facility to prevent storm water run on and run off to and from the facility, respectively. All storm water falling within the facility will be contained and directed to the surface impoundments. The facility will contain the volume of water from a 1,000-year, 24-hour storm event (Appendix B). Detailed drawings in the appendices show the elevation requirements necessary for the waste pile. There is a minimum berm height of 1 foot around the entire facility. Areas such as the overflow area and entrance have a much higher berm (see attached drawings). The waste pile will be compacted native soil and sloped to prevent ponding. The waste pile will be inspected daily for any signs of erosion and will be repaired immediately if necessary. The monitoring wells and production well are not located within the drainage structures.

The waste pile liner consists of a minimum of 12 inches of engineered fill consisting of native subgrade compacted to 90 percent relative compaction using American Society of Testing and Materials (ASTM) D1557 as the compaction standard. The ROWD demonstrated, through extensive modeling and laboratory testing, that the entire site (including the overflow area) has sufficient hydraulic conductivity to prevent percolation and will not pose a threat to groundwater quality.

3.2 Surface Impoundment Design

The two surface impoundments are artificial ponds designed to capture 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. This volume was 10.5 acre feet for surface impoundment A and 6.5 acre feet for surface impoundment B (see attached hydrology study for calculations and further explanation). The calculations for the sizing of the surface impoundments and a drawing of the surface impoundments that details the depths of each surface impoundment can be found in the attached hydrology report. There is a 1,000-year berm with multiple inlets around the perimeter of both surface impoundments so that storm water can be stopped from entering the basins if necessary, to maintain a freeboard of 2 feet in the surface impoundments. Buildings, vehicle parking, compost piles, and other onsite equipment were factored in to the volume calculations for the overflow area. The minimum elevation height of the 1,000-year berm is 2317.14 feet on the west side of the facility containing surface impoundment A (see attached hydrology study and drawings for calculations and further explanation). The minimum elevation height of the 1,000-year berm is 2318.41 feet on the east side of the facility containing surface impoundment B (see attached hydrology study for calculations and



REV	DESCRIPTION OF REVISION	BY	DATE
1	ISSUED FOR CONSTRUCTION	JLN	04-01-10

GRAPHIC SCALE
100 50 0 50 100
1 inch = 100 feet

URS
1615 Murrey Canyon Road, Suite 1000
San Diego, California 92108

PROJECT	27657037.00100
DESIGNED	JLN
CHECKED	LDH
PROJECT MANAGER	DEM
DATE	04-01-10

HAWES COMPOSTING FACILITY
SAN BERNARDINO COUNTY, CA

GRADING PLAN

REVISION 1

SHEET NO. 2 of 6

HYDROLOGY STUDY FOR THE 1,000-YEAR FLOOD EVENT

HAWES COMPOST FACILITY

SOUTHEAST ¼ OF SECTION 36, TOWNSHIP 10 NORTH AND RANGE 4 WEST
SAN BERNARDINO COUNTY, CALIFORNIA

PREPARED FOR:

NURSERY PRODUCTS
12277 APPLE VALLEY ROAD, SUITE 131
APPLE VALLEY, CA 92308

PREPARED BY:

AEI CASC CONSULTING

937 SOUTH VIA LATA, SUITE 500
COLTON, CA 92324
(909) 783-0101 • FAX (909) 783-0108

AUGUST 10, 2010
REVISION NO. 1

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EXHIBITS

I. PURPOSE AND SCOPE

The purpose of this study is to determine the 1,000-year/24-hour flood volume emanating from the Hawes Compost Facility in order to determine the required minimum elevation of the perimeter containment structure (i.e. berm, inflatable rubber tube, etc.) to be placed along the upstream or southerly side of the retention basins and the westerly and northeasterly corner of the facility as required by the Lahontan Regional Water Quality Control Board (LRWQCB).

As discussed in the previous hydrology study (Reference 1), the two retention basins (Basins "A" and "B") are sized to contain the 100-year, 24-hour storm volume that emanates from the composting facility. LRWQCB requires that a portion of the composting area outside of the proposed retention basins will and must contain the differential flood volume between the 1,000-year/24-hour and the 100-year/24-hour flood events emanating from the facility. This computed differential flood volume is regarded as the "net flood volume". The portion of the composting area that will retain the net flood volume is considered as "on-site area". According to LRWQCB, the 100-year, 24-hour storm volume will be allowed to discharge into the two retention basins including the 1,000-year/24-hour storm flow (and volume) that falls directly on the basins.

The scope of the study includes the following:

1. Determination of the 1,000-year/24-hour flood volume based upon the previous hydrology study for the site.
2. Determination of the required minimum elevation of the perimeter containment structure (i.e. berm, inflatable rubber tube, etc.) to be placed along the upstream or southerly side of the retention basins and the westerly and northeasterly corner of the facility based on the "net flood volume".
3. Preparation of the hydrology report including the hydrology maps.

II. PROJECT SITE AND DRAINAGE AREA OVERVIEW

The proposed Hawes Compost Facility is located in the southeast ¼ of Section 36, Township 10 North and Range 4 West. The project is located within the unincorporated area of San Bernardino County. Currently, the project site consists of desert valley area with sparse desert vegetation, draining in a northerly direction.

The proposed grading and site layout consists of two drainage areas (On-Site Areas "A" and "B") and each area drains into a retention basin, Basin "A" and Basin "B". The site slopes gently from south to north (see Exhibit "A").

III. HYDROLOGY

The previous AEI-CASC hydrology report entitled, "Hydrology and On-site Retention Basin Sizing Study" dated April 21, 2008 (Reference 1) and the San Bernardino County Flood Control District (SBCFCD) Hydrology Manual, (Reference 2) were used to develop the hydrological parameters for the 1,000-year storm event. The Unit Hydrograph method was used for the analyses. Computations were performed using the UNSBC computer program developed by Civil Cadd/Civil Design.

The 1,000-year rainfall values used in this study were obtained by multiplying the 100-year rainfall values by 1.35 (Reference 3). The 100-year rainfall values were obtained from the previous report (Reference 1).

IV. FINDINGS

The hydrology analysis evaluated the 1,000-year/24-hour flood volume generated by the on-site areas (Areas "A" and "B") emanating from the facility. Table 1 tabulates the 1,000-year/24-hour flood volume and 100-year/24-hour flood volume from these drainage areas. As mentioned earlier, the 100-year/24-hour flood volume was developed from the previous hydrology report (Reference 1). The table also shows the "net flood volume", which is the differential flood volume between the 1,000-year/24-hour and 100-year/24-hour flood events. The "net flood volume" will be used to determine the minimum elevation of the perimeter containment structure such as berm, inflatable rubber tube, etc. to be placed along the upstream or southerly side of the retention basins and the westerly and northeasterly corner of the facility. The proposed retention basins "A" and "B" will be sized to retain and store the tributary on-site 100-year/24-hour flood volumes including the 1,000-year/24-hour flow (and flood volume) that falls directly on the basins with a minimum of 2 feet of freeboard.

As required by LRWQCB, the perimeter containment structure will be sized to contain the "net flood volume" within the on-site area. The minimum elevation of the perimeter containment structure was determined based upon the preliminary grading plans, which shows the proposed surface area (on-site area) available for storing the net flood volume.

The results of the retention basin volume capacity calculations for Retention Basins "A" and "B" based upon the 100-year flood event are presented in Tables 2 and 4, respectively. On the other hand, the results of the surface volume capacity calculations for the "net flood volume" (i.e. differential flood volume between the 1,000-year/24-hour and 100-year/24-hour storm events) for On-Site Areas "A" and "B" are presented in Tables 3 and 5, respectively.

As depicted in Table 2, the 100-year/24-hour flood volume of 10.5 acre-feet emanating from On-Site Area "A", which includes the 1,000-year/24-hour flow (and flood volume)

that falls directly on the basins, is contained within Retention Basin "A", yielding a maximum water surface elevation of 2313. Since the top of the retention basin is designed at elevation 2315, the available basin freeboard is 2.0 feet.

Table 3 tabulates the results of the surface volume capacity calculations associated with the "net flood volume" for on-site area "A". As shown in the table, the elevation required to contain the net flood volume of 9.8 acre-feet within the on-site area is 2317.14, encompassing a surface area of approximately 7.0 acres (see Exhibit "A").

As presented in Table 4, the 100-year/24-hour flood volume of 6.5 acre-feet emanating from On-Site Area "B", which includes the 1,000-year/24-hour flow (and flood volume) that falls directly on the basins, is contained within Retention Basin "B", yielding a maximum water surface elevation of 2315. Since the top of the retention basin is designed at elevation 2317, the available basin freeboard is 2.0 feet.

Table 5 tabulates the results of the surface volume capacity calculations associated with the "Net Flood Volume" for on-site area "B". As shown in the table, the elevation required to contain the net flood volume of 6.0 acre-feet within the on-site area is 2318.41, encompassing a surface area of approximately 6.7 acres (see Exhibit "A").

Table 1: Hydrology Results

DRAINAGE AREA	1,000-YEAR/24-HOUR FLOOD VOLUME (AF)	100-YEAR/24-HOUR FLOOD VOLUME (AF)	NET FLOOD VOLUME (AF)
ON-SITE AREA "A"	20.3	10.5	9.8
ON-SITE AREA "B"	12.5	6.5	6.0

V. REFERENCES

1. "Hydrology and On-site Retention Basin Sizing Study", prepared by AEI-CASC Consulting, April 21, 2008.
2. San Bernardino County Flood Control District Hydrology Manual.
3. San Bernardino County Flood Control District's Detention Basin Design Criteria.

APPENDICES

APPENDIX "A": 1,000-YEAR UNIT HYDROGRAPH ANALYSIS FOR ON-SITE COMPOSTING AREA "A"

APPENDIX "B": 1,000-YEAR UNIT HYDROGRAPH ANALYSIS FOR ON-SITE COMPOSTING AREA "B"

APPENDIX "C": 1,000-YEAR AND 100-YEAR VOLUME CAPACITY CALCULATIONS FOR COMPOSTING AREAS "A" AND "B" AND RETENTION BASINS "A" AND "B"

TABLE 2: 100-YR/24-HOUR VOLUME CAPACITY CALCULATIONS FOR RETENTION BASIN "A"; IT INCLUDES THE 1,000-YEAR/24-HOUR FLOW AND FLOOD VOLUME THAT FALLS DIRECTLY ON THE BASINS

ELEVATION	DEPTH	AREA (SF)	AREA (AC)	VOLUME (AC-FT)	VOLUME TOTAL (AC-FT)
2304.5		11924.9	0.3	0.0	0.0
	0.5				
2305		20279.7	0.5	0.0	0.0
	1				
2306		38192.7	0.9	0.0	0.0
	1				
2307		57509.1	1.3	1.1	1.1
	1				
2308		78296.6	1.8	1.6	2.6
	1				
2309		82091.9	1.9	1.8	4.5
	1				
2310		85948.9	2.0	1.9	6.4
	1				
2311		89867.4	2.1	2.0	8.4
	1				
2312		**93839.2**	**2.2**	**2.1**	**10.5**
	1				
2313		97886.5	2.2	2.2	12.7
	1				
2314		101739.5	2.3	2.3	15.0

TABLE 3: NET FLOOD VOLUME SURFACE CAPACITY CALCULATIONS FOR ON-SITE AREA "A"					
ELEVATION	DEPTH	AREA (SF)	AREA (AC)	VOLUME (AC-FT)	VOLUME TOTAL (AC-FT)
2315		107077.3	0.0	0.0	0.0
	1				
2316		111033.9	2.5	2.5	
		74196.50	1.7	0.85	3.4
	1				
2317		190186.1	4.4	4.4	
		96701.70	2.2	1.11	8.9
	0.14				
2317.14		286887.8	6.6	0.9	
		17652.30	0.4	0.03	**9.8**
	0.86				
2318		304540.1	7.0	6.0	
		82370.20	1.9	0.81	16.7
	1				
2319		386910.3	8.9	8.9	
		99990.90	2.3	1.15	26.7
	1				
2320		486901.2	11.2	11.2	
		78134.20	1.8	0.90	38.8

TABLE 4: 100-YR/24-HOUR VOLUME CAPACITY CALCULATIONS FOR RETENTION BASIN "B"; IT INCLUDES THE 1,000-YEAR/24-HOUR FLOW AND FLOOD VOLUME THAT FALLS DIRECTLY ON THE BASINS

ELEVATION	DEPTH	AREA (SF)	AREA (AC)	VOLUME (AC-FT)	VOLUME TOTAL (AC-FT)
2308.5		6792.5	0.2	0.0	0.0
	0.5				
2309		13579.4	0.3	0.0	0.0
	1				
2310		28356.7	0.7	0.0	0.0
	1				
2311		44408.2	1.0	0.8	0.8
	1				
2312		61326.5	1.4	1.2	2.0
	1				
2313		64744.3	1.5	1.4	3.5
	1				
2314		68220.4	1.6	1.5	5.0
	1				
2315		**71755.9**	**1.6**	**1.6**	**6.6**
	1				
2316		75347.7	1.7	1.7	8.3
	1				
2317		84574.7	1.9	1.8	10.1

TABLE 5: NET FLOOD VOLUME SURFACE CAPACITY CALCULATIONS FOR ON-SITE AREA "B"

ELEVATION	DEPTH	AREA (SF)	AREA (AC)	VOLUME (AC-FT)	VOLUME TOTAL (AC-FT)
2317		84750.2	0.0	0.0	0.0
	1				
2318		84750.2	1.9	1.9	
		138850.20	3.2	1.59	3.5
	0.41				
2318.41		223600.4	5.1	2.1	
		68134.40	1.6	0.32	**6.0**
	0.59				
2319		291734.8	6.7	4.0	
		87149.70	2.0	0.59	10.5
	1				
2320		378884.5	8.7	8.7	
		154909.60	3.6	1.78	21.0
	1				
2321		533794.1	12.3	12.3	
		152797.30	3.5	1.75	35.0

EXHIBITS

EXHIBIT "A": COMPOSTING AREA EXHIBIT