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By Alameda County Environmental Health 4:04 pm, Feb 02, 2016

January 28, 2016

Ms. Dilan Roe  
Site Cleanup Program Manager  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94501-6577

**Subject: Dublin Apartments Permeable Reactive Barrier  
Construction Completion Certification**  
Former Crown Chevrolet North Parcel  
7544 Dublin Boulevard  
Dublin, California  
Site Cleanup Program Case No. RO0003014

Dear Ms. Roe:

Enclosed please find a letter entitled *Dublin Apartments Permeable Reactive Barrier Construction Completion Certification* for the Former Crown Chevrolet North Parcel site at 7544 Dublin Boulevard, in Dublin, California (Site Cleanup Program Case No. RO0003014, GeoTracker Global ID T10000001616). This document was prepared by Amec Foster Wheeler Environment & Infrastructure, Inc., on behalf of BWD Dublin LLC.

I declare under penalty of perjury that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Please contact me at (408) 680-4938 or Avery Whitmarsh of Amec Foster Wheeler at (510) 663-4154 if you have any questions regarding this report.

Sincerely yours,



Pete Beritzhoff  
BWD Dublin LLC

Attachment: Dublin Apartments Permeable Reactive Barrier Construction Completion Certification

January 28, 2016

Project OD14170800.02.4

Ms. Dilan Roe  
Site Cleanup Program Manager  
Alameda County Department of Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94501-6577



**Subject: Dublin Apartments Permeable Reactive Barrier  
Construction Completion Certification**  
Former Crown Chevrolet North Parcel  
7544 Dublin Boulevard  
Dublin, California  
Site Cleanup Program Case No. RO0003014

Dear Ms. Roe:

Amec Foster Wheeler Environment & Infrastructure, Inc. ("Amec Foster Wheeler") has reviewed the *Completion Report, Permeable Reactive Barrier (PRB)* ("Construction Completion Report;" Attachment 1)<sup>1</sup> submitted by Magnus Pacific LLC. Amec Foster Wheeler hereby certifies that PRB construction at 7544 Dublin Boulevard, Dublin, California (the "Site") has fulfilled the requirements for quality that were presented in the technical specifications and design drawings ("Construction Documents") and the *Vapor Mitigation and Permeable Reactive Barrier Basis of Design Report* (Design Report).<sup>2</sup> This certification letter has been prepared pursuant to the requirements outlined in the Design Report and the *Construction Quality Assurance Plan* ("CQA Plan").<sup>3</sup> The purpose of this letter is to certify the construction of the PRB only; a vapor mitigation system currently undergoing construction at the Site will be certified separately following its construction and commissioning.

The PRB construction consisted of a 147-foot-long trench excavated to approximately 30 feet below ground surface that was backfilled with a mixture of zero valent iron (ZVI) and sand treatment media and capped with a controlled density fill (sand cement slurry). The PRB was constructed by Magnus Pacific ("Subcontractor"), a subcontractor to the general contractor, ZCON Builders ("Contractor"), general contractor for the development project, on behalf of the owner, Dublin Apartments Properties LLC ("Owner"). Amec Foster Wheeler prepared the CQA Plan prior to PRB construction and implemented the CQA Plan during construction. CQA activities were performed by Mr. Douglas Bablitch, PE (CQA Manager and Design Engineer), and Ms. Hilary Nevis (CQA Engineer).

Amec Foster Wheeler staff was present at the Site during critical construction activities including, but not limited to, mobilization, construction layout, excavation, treatment media mixing, backfill placement, and PRB trench development. Amec Foster Wheeler CQA staff performed the following duties to satisfy the quality assurance requirements set forth in the CQA Plan:

Amec Foster Wheeler Environment & Infrastructure, Inc.  
180 Grand Avenue, Suite 1100  
Oakland, California 94612-3066  
USA  
Tel (510) 663-4100  
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amecfw.com

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- Reviewed the pertinent pre-construction submittals called out in the October 9, 2015, *Dublin Apartments Pre-Construction Submittal Review for Permeable Reactive Barrier* letter from Amec Foster Wheeler to Alameda County Environmental Health.<sup>4</sup>
- Participation in PRB pre-construction conference and other Site meetings with the Subcontractor, Contractor, and Owner throughout the construction duration.
- Performed audits of the Contractor Quality Control Plan<sup>5</sup> (“CQC Plan”) performance throughout PRB construction.
- Reviewed daily field memos and CQC Plan documentation, such as magnetic separation test results from samples collected before and during PRB media placement and ZVI/sand mixture weights per batch of PRB media.
- Reviewed and approved Magnus Pacific’s Construction Completion Report (Attachment 1).

Amec Foster Wheeler hereby certifies that the PRB construction was performed consistent with the requirements of the Construction Documents. Deviations from the Construction Documents received approval from the Design Engineer, Contractor, and Owner, and are documented in Section 4.0 of Attachment 1. Photographs documenting construction activities are included in Attachment 2 of this letter.

Sincerely yours,  
Amec Foster Wheeler, Environment & Infrastructure, Inc.

*Douglas C. Bablitch*

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Principal Engineer  
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*Hilary Nevis*

Hilary Nevis, PE C85061  
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Attachments: 1 – Completion Report, Permeable Reactive Barrier  
2 – Selected Construction Photographs

cc: Pete Beritzhoff, Bay West Development  
Tino Maestas, P.E., Magnus Pacific LLC

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Alameda County Department of Environmental Health  
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- <sup>1</sup> Magnus Pacific, LLC., 2015. Completion Report, Permeable Reactive Barrier (PRB), Dublin Apartments – Crown Chevrolet North Parcel, 7544 Dublin Blvd, Dublin, California, November 5.
  - <sup>2</sup> Amec Foster Wheeler, 2015. Permeable Reactive Barrier Basis of Design Report, Former Crown Chevrolet North Parcel, 7544 Dublin Boulevard, Dublin, California, June 11.
  - <sup>3</sup> Amec Foster Wheeler, 2015. Construction Quality Assurance Plan, Permeable Reactive Barrier, Former Crown Chevrolet North Parcel, 7544 Dublin Boulevard, Dublin, California, June 11.
  - <sup>4</sup> Amec Foster Wheeler, 2015. Dublin Apartments Pre-Construction Submittal Review for Permeable Reactive Barrier, Dublin Apartments – Crown Chevrolet North Parcel, 7544 Dublin Blvd, Dublin, California, October 9.
  - <sup>5</sup> Magnus Pacific, LLC, 2015. Contractor Quality Control Plan Permeable Reactive Barrier (PRB), Dublin Apartments – Crown Chevrolet North Parcel, 7544 Dublin Blvd, Dublin, California, October 8.



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**ATTACHMENT 1**

Completion Report, Permeable Reactive Barrier (PRB)

**COMPLETION REPORT**  
**PERMEABLE REACTIVE BARRIER (PRB)**  
**DUBLIN APARTMENTS –**  
**CROWN CHEVROLET NORTH PARCEL**  
**7544 DUBLIN BLVD, DUBLIN, CALIFORNIA**

**NOVEMBER 5, 2015**

**Prepared for:**

**PRIME CONTRACTOR**  
**Zaskorn Construction Company**  
**DbA ZCON Builders**  
**780 West Grand Ave.**  
**Oakland, CA 94612**

**OWNER**  
**Dublin Apartment Properties LLC**  
**2 Henry Adams St, Ste 450**  
**San Francisco, CA 94103**

**Prepared by:**

**Magnus Pacific, LLC.**  
**6558 Lonetree Blvd.**  
**Rocklin, CA 95765**  
**Phone: (916) 462-6400**

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### Attachments

Attachment A – PRB Plan and Profile As-built

Attachment B – Material Gradations and Hydraulic Conductivity Testing

Attachment C – Iron Aggregate Certificate of Analysis

Attachment D – Geotextile Product Data Sheet

Attachment E – CDF Mix Design and Delivery Batch Tickets

Attachment F – Final Breakdown of Biopolymer Slurry Demonstration

Attachment G – Central Concrete Supply Co Mix Design

Attachment H – Potrero Hills Landfill Special Waste Profile, Disposal Log, & Manifests

Attachment I – DSRSD Industrial Wastewater Discharge Permit & Disposal Log

Attachment J – ZVI/Sand Batch Logs & Magnetic Separation Testing

Attachment K – CDF Unconfined Compressive Strength Test Results

Attachment L – Construction Photos (submitted separately)

Attachment M – Performance Warranty

## 1.0 INTRODUCTION

Magnus Pacific, LLC (Magnus) has completed the Permeable Reactive Barrier at the Dublin Apartments Project site in accordance with Technical Specification 025010 dated June 9<sup>th</sup> 2015, PRB Plan Drawings dated June 2015, Magnus Pacific PRB Project Execution Plan (Submittal No. 025010-0001.1) dated October 5<sup>th</sup> 2015, Magnus Pacific Contractor Quality Control Plan (Submittal No. 025010-0002.2) dated October 8<sup>th</sup> 2015, and approved project variations/deviations. This completion report provides a synopsis of the work and summarizes the quality control completed throughout the project.

### 1.1 Site Description

The Site was developed in 1968 as Crown Chevrolet, a car dealership with auto body shops, on land that appears to have been previously used for agricultural purposes. Operations as a car dealership and auto body shop continued from 1968 through 2013. The property was sold to BWD Dublin in the fall of 2014, and the site buildings were demolished in December 2014 in preparation for redevelopment.

The Site is located in the northwest corner of the intersection of Highway 680 and Highway 580 in Dublin, California bordered to the north by Dublin Boulevard, to the West by Golden Gate Drive, and to the South by St Patrick Way.

### 1.2 Project Overview

Site redevelopment is scheduled to begin in summer 2015. The redevelopment will include mixed residential/commercial buildings at the site, comprising 313 apartments (a total of approximately 323,000 gross square feet in multi-unit structures) and 17,000 square feet of retail space at ground level along Dublin Boulevard; some of the apartments will be located above the retail space. An approximately 230,000-square-foot parking garage is planned for the eastern central portion of the site.

The absolute and functional corrective action objectives (CAOs) for the site were established in the approved FS/CAP for the protection of human health and the environment and are listed in Section 2.2 of the Amec Foster Wheeler Design Report. To address the first CAO and mitigate the risk to future site residents from potential vapor intrusion of VOCs in soil vapor to indoor air, the FS/CAP recommended the installation of a PRB to treat impacted groundwater migrating onto the site.



The PRB consists of a trench installed along the up-gradient site boundary that was backfilled with a mixture of granular Zero Valent Iron (ZVI) and sand where natural hydraulic gradients adjacent to and beneath the site will cause PCE-affected groundwater to flow through the PRB to reduce Volatile Organic Compounds (VOC) concentrations.

The PRB design consists of the following elements:

- A 24-inch-wide, 146-foot-long continuous trench that is backfilled with ZVI/sand treatment media located near the upgradient site boundary along Golden Gate Drive.
- The PRB was installed to approximately 29 feet bgs, including a 1-foot key into an existing clay layer observed from approximately 28 to 30 feet bgs.
- The treatment media was prepared in a 55% / 45% ZVI/sand ratio by volume, creating an equivalent 1.1-foot-thick treatment zone of ZVI.

### 1.3 Project Milestone Dates

10/05/2015 – Began mobilization and site setup.

10/12/2015 – Began excavation of the biopolymer trench starting at Sta. 11+46.

10/13/2015 – Began placement of Zero Valent Iron (ZVI)/sand media at Sta. 11+46.

10/15/2015 – Completed excavation of biopolymer trench at Sta 10+00.

10/17/2015 – Completed ZVI/sand backfill placement via 18-inch tremie pipe.

10/19/2015 – Completed installation of the Controlled Density Fill (CDF) cap

10/26/2015 – Began load-out of excavation trench spoils for T&D at Potrero Hills Landfill.

10/27/2015 – Began discharge of wastewater to the Dublin San Ramon Services District (DSRSD) sanitary sewer.

10/28/2015 – Completed load-out of excavation trench spoils for T&D at Potrero Hills Landfill.

10/29/2015 – Completed discharge of wastewater to the DSRSD sanitary sewer.

10/29/2015 – Substantially complete with Site breakdown and demobilization.

## 2.0 WORK DESCRIPTION

### 2.1 Permeable Reactive Barrier (PRB)

Magnus completed the construction of the Permeable Reactive barrier using the biopolymer slurry trench installation method using a Komatsu PC490 excavator equipped with a specialty long stick and a 28-inch bucket to excavate the trench. The trench alignment was staked-out by Carlson, Barbee & Gibson, Inc prior to excavation. The trench alignment was dictated by the planned layout of the curb and gutter where the eastern side of the PRB trench aligned with the future alignment of the gutter pan. When Magnus proposed 28-inch wide excavation versus the design width of 24-inches, the additional 4-inches of the PRB trench was shifted west or street side assuring that the eastern side of the trench was aligned with the gutter pan as originally designed.

A field variation in the trench alignment was made from Sta. 11+46 to Sta. 11+29 to straighten the design curve to within limitations of the excavator. AMEC Foster Wheeler provided design elevations for each 10-foot station increment for the bottom of the PRB. Magnus over-excavated from +0.5 to +1.8 FT deeper than the design elevation at as shown in the as-built profile. The vertical datum referenced in the excavation bottom elevations is NGVD29. Magnus excavated a total of 4,364 square feet using the biopolymer slurry trench method. The survey as-built and profile of the PRB is enclosed in Attachment A.

Magnus mixed a total of (44) 5.9-CY batches of ZVI/sand media and (1) 1.1-CY batch of ZVI/sand media that was backfilled and placed in the trench via an 18-inch tremie pipe. Additional ZVI was added to individual batches that did not pass initial magnetic separation test. Reference Section 3.0 for Quality Control testing of the ZVI and sand batch proportioning. Mixing of the ZVI/sand was completed using ready-mix trucks with batches consisting of 12,000-lbs of zero-valent iron to 7,400-lbs of sand. This mix ratio by weight was derived by using measured bulk densities of each material performed by Geo-Logic Associates to convert the design iron equivalent thickness from volume to weight. The design ZVI to sand mix was 55% / 45% ZVI to sand by volume. For a 24-inch trench, the equivalent thickness of iron is 1.1 feet (at 55%). When Magnus proposed a 28-inch bucket, the designed equivalent thickness of iron is the same at 1.1 feet, however, the additional volume by the wider excavation is then accommodated by an increase in sand. For a 28-inch trench, the new design volume is 47% / 53% ZVI to sand by volume. Converting this volume using the measured bulk densities, the ZVI to sand batch proportioning is 62% Iron to 38% sand by weight. Pre-construction testing of the iron aggregate and sand included material gradations and bulk densities per each material and hydraulic conductivity per each material and as-mixed per the original design mix of 55% / 45% ZVI to sand by volume. The pre-construction test data is enclosed in Appendix B.

**Table 1 – ZVI/Sand Design Proportioning**

<b>Trench Width</b>	<b>ZVI/Sand by Volume</b>	<b>ZVI/Sand by Weight</b>
24-inches	55% / 45%	69% / 31%
28-inches	47% / 53%	62% / 38%

ZVI bags were pre-weighed and certified in 3,000-lb bulk bags as received from Connolly-GPM, which was considered an accurate weight. The Certificate of Analysis for the iron manufactured by Connolly-GPM are enclosed in Attachment C. Sand received from Silica Resources, Inc. was pre-bagged in 2,000-lb bulk bags, however, with a larger deviation of the actual weight. Magnus used portable scales to measure the weight of each bag of sand before loading into the ready-mix truck and the final balance of sand was metered by a vertical screw auger to ensure a consistent method of proportioning the sand. Water was added to the ZVI/sand mixture after loading of iron and sand into the ready-mix truck.

ZVI/sand placement was performed using the chute of the read-mix truck directly discharging PRB media into the hopper of the tremie pipe. The tremie pipe fall height was limited to no more than 5 feet of drop height. As the PRB backfill built up in the trench, the tremie pipe was moved horizontally down-station along the trench alignment. PRB backfill was placed to a minimum elevation of 331.0 feet NGVD29 as shown in the as-built profile. Magnus installed (6) 4-inch diameter re-circulation pipes spaced on 25-foot intervals along the trench alignment with one at each end of the trench that are perforated on the bottom 20 feet of the pipe. Displaced biopolymer slurry from ZVI/sand placement was pumped out the trench into an 18,000-gallon frac tank pending slurry breakdown and disposal to the sanitary sewer.

## 2.2 Permeable Reactive Barrier Cap

Upon verifying that the PRB backfill was placed to a minimum elevation of 331.0 feet NGVD29, Magnus installed a single layer of Mirafi 180 NC, 8-oz non-woven geotextile on the top surface of the PRB backfill. The Mirafi 180 NC is 15-feet wide and 300-feet long per roll. The Mirafi 180 NC product data sheet is enclosed in Attachment D. A single width of the roll was placed in the trench allowing the extra width of the roll to extend up the sidewalls approximately 6 feet on each side. The geotextile was held in place using speed-shoring that was placed in the trench to facilitate Controlled Density Fill (CDF) placement. (3) 8-inch diameter HDPE (SDR-17) pipes were placed at Sta. Nos. 11+20, 10+80, and 10+40 for future monitoring well conductor casings. The geotextile was cut with an "X" at each protrusion location for each 4-inch diameter re-circulation pipe and the (3) 8-inch diameter conductor casings.

CDF backfill was manufactured by RC Ready Mix Co consisting of a 1-sack Portland Cement sand slurry. The CDF mix design and delivery batch tickets are enclosed in Attachment E. Magnus placed (11) 9-CY batches of CDF up to elevation 340.0 feet NGVD29 in less than a 5 hour duration as referenced by the batch tickets. Displaced biopolymer slurry from CDF placement was pumped out of the trench into an 18,000-gallon frac tank pending slurry breakdown and disposal to the sanitary sewer. The 8-inch diameter HDPE conductor casings were capped with an HDPE slip cap, the surrounding soil re-graded and a 3-foot diameter 1-inch thick steel plate placed over each monitoring well casing and surveyed by Carlson, Barbee & Gibson, Inc. The as-built survey of the PRB alignment and locations of the monitoring well casings is enclosed in Attachment A.

### 2.3 Slurry Breakdown

Magnus began breaking of the biopolymer slurry upon final placement of ZVI/sand. The biopolymer slurry was being re-circulated in the trench throughout the last day of final ZVI/sand placement. Trench development continued throughout CDF cap placement and continued until a minimum viscosity measurement of less than 30 marsh funnel seconds (mfs) was achieved in each of the six re-circulation pipes. Magnus successfully demonstrated that there is no permanent decrease in hydraulic conductivity by conducting viscosity measurements at a minimum of once per 25 feet of PRB installed. Final breakdown and documentation of the biopolymer slurry demonstration is enclosed in Attachment F.

Re-circulation pipes were abandoned after each location had demonstrated that the biopolymer slurry was broken to less than 30 mfs. Iron aggregate was placed in a 100% concentration in each of the six recirculation pipes from the bottom of the pipe up to a minimum elevation of 331.0 feet NGVD29. The pipes were then filled with 1,500-psi sand cement slurry that was supplied by Central Concrete Supply Co from the top of the PRB media to elevation 340.0 feet NGVD29. The mix design for 1,500-psi sand cement slurry is enclosed in Attachment G.

### 2.4 Waste Management and Disposal

Magnus constructed a lined Soil Stockpile and Staging cell for consolidation of excavation trench spoils and temporary staging until the waste was profiled and accepted for disposal at a regulated disposal facility. Magnus disposed of 742.56 Tons of waste materials (including disposal of the liner materials) at the Potrero Hills Landfill located at 3675 Potrero Hills Lane, Suisun, CA 94585. The Special Waste Profile is enclosed in Attachment H along with the disposal manifests and disposal weight log.

Magnus also contained approximately 36,000-gallons of wastewater consisting biopolymer slurry that was captured during displacement of PRB media and CDF placement pending slurry breakdown and disposal to the Dublin San Ramon Services District (DSRSD) sanitary sewer. Magnus received a permit for disposal by the DSRSD and the wastewater was tested in

compliance with the permit. The analytical testing indicated a Total Dissolved Solids concentration (TDS) greater than the permit allowance of 1,000 mg/L. Magnus submitted a request for waiver and subsequently received approval from the DSRSD to dispose of the wastewater with a TDS concentration greater than the permit allowance. The DSRSD Sewer Pretreatment Program Industrial Wastewater Discharge Permit and wastewater disposal log are enclosed in Attachment I.

### 3.0 QUALITY CONTROL

Subcontractor Daily Quality Control reports, submitted throughout the work, detail the work completed on each day and the quality control measures used to monitor and control the work.

In total, 4,364 vertical square feet (VSF) of excavation was completed under the biopolymer slurry trench method and approximately 3,119 VSF of ZVI/sand media was placed as measured by soundings. Magnus batched approximately 260.7 cubic yards of ZVI/sand media that was placed in the trench that consists of 270 tons of iron and 156 tons of sand. Magnus purchased a total of 283.5 TN of aggregate iron and 9 bags (13 TN) were remaining on-site at the conclusion of the project. Similarly, Magnus purchased a total of 178 TN of sand and 22 bags (22 TN) were remaining on-site at the conclusion of the project.

Samples of the slurry from the batch plant and from the trench were collected twice daily. The following slurry properties from the batch plant and in-trench slurry were measured and recorded twice daily: viscosity, density, and pH. Biopolymer slurry mixing was performed in accordance with the manufacturer's mix design.

**Table 2 – Biopolymer Materials Used**

<b>Material</b>	<b>Unit</b>	<b>Quantity</b>
G150 Guar Gum	KG	2100
Busan 1202	LB	66.3
Soda Ash	LB	350
LEB-H	GAL	8

ZVI/sand backfill samples were tested per batch basis for the first six batches mixed per day and every six thereafter. ZVI/sand backfill as-mixed in the ready-mix truck was tested for percent iron by weight using the magnetic separation test procedure. Non-compliant samples required additional mixing time in the ready-mix truck, re-testing, and where noted, an additional bag of iron was added to the ready mix truck to ensure that the magnetic separation test showed a minimum of 61.85% iron by weight with a (-)2% deviation allowed. The magnetic separation test procedure and the ZVI/sand Batch Logs and all magnetic separation tests performed are enclosed in Attached J.

**Table 3 – ZVI/sand as Mixed**

<b>Date</b>	<b>No. of Tests Performed</b>	<b>No. of Re-Tests</b>
10/13/15	3	1
10/14/15	6	5
10/15/15	7	1
10/16/15	6	2
10/17/15	6	1

ZVI/sand backfill samples were collected as-placed from the trench at 20-LF of PRB media placed. ZVI/sand backfill as-placed in the trench were tested for percent iron by weight using the magnetic separation test procedure. A total of 7 in-trench samples were collected from ZVI/sand backfill placement and all tests show that the minimum iron percentage of 61.85% by weight with a (-)0% deviation was contained in the in-trench sample.

Once set of cylinders were also cast from the CDF placed in the trench by Rockridge Geotechnical and tested for unconfined compressive strength at 16-days and 28-days. The test data is enclosed in Attachment K.

## 4.0 VARIATIONS/DEVIATIONS FROM THE PLANS AND SPECIFICATIONS

Variations from the Specification are noted in this section and have been approved with the Engineer, Construction Manager and Owner.

**Table 4 - Variances**

No	Description	Specification	Variance
1	Trench Width	DWG C-4, Detail 1 indicates 2-foot wide PRB	Magnus specialty long stick configuration and pin connection to the bucket requires a minimum bucket width of 28-inches. Additional sand was used in the batch calculations to maintain a ZVI equivalent thickness of 1.1 feet. The iron percentage volume changed from 55% iron to 47.14% iron.
2	Alignment	DWG C-3, Plan View	The radius from Sta. 11+46 to Sta. 11+29 was straightened in the field to include two straight segments with a point of intersection at Sta. 11+29 due to physical limitation with the excavator.
3	Depth	DWG C-3, Note 7 and Section 3.4.B of Spec 025010 indicate tolerance for bottom elev. is -0.1/+0.5 FT.	Excavation exceeded design elevation tolerances at Sta. 11+40, 11+30, 11+00 thru 10+70, 10+40, 10+20 thru 10+00. Inspections of the excavation spoils indicated clay material consistent throughout each station that exceeded design tolerances.
4	Top width	DWG C-3, Note 7 and Section 3.4.B of Spec 025010 indicate tolerance for PRB width is -0.0/+0.5 FT.	The as-built survey of the top of CDF reflects the expression of the PRB trench backfill at the surface. The width of the trench is generally vertical, on alignment, and approximately 28-inches wide.
5	CDF Cap Placement	DWG C-4, Detail 1 shows CDF depth varies to match existing grade	CDF was poured to elevation 340.0 FT NGVD29 rather than existing grade (approximately 340.7 FT) to meet planned working grade for ZCON.
6	Recirculation Pipe Abandonment	Section 3.4.F.3 of Spec 05010 indicates to abandon the pipe above the ZVI with grout	Magnus used 1,500-psi sand cement slurry manufactured by Central Concrete Supply Co to abandon the pipe riser from the top of the ZVI at elevation 331.0 FT NGVD29 to the top of the cap at elevation 340.0 FT NGVD29.
7	CDF Test Frequency	Section 1.7.1 of Spec 312310 requires test frequency twice for the initial 50 cubic yards	Rockridge Geotechnical only collected one set of samples (3) 6x12 inch molds for testing at 7, 28, and 56 days. An additional set of cylinders was not collected for the 99 cubic yards of CDF placed. Also, testing at 7-day was missed and the first cylinder was tested at 16-days.



## 5.0 CONCLUSION

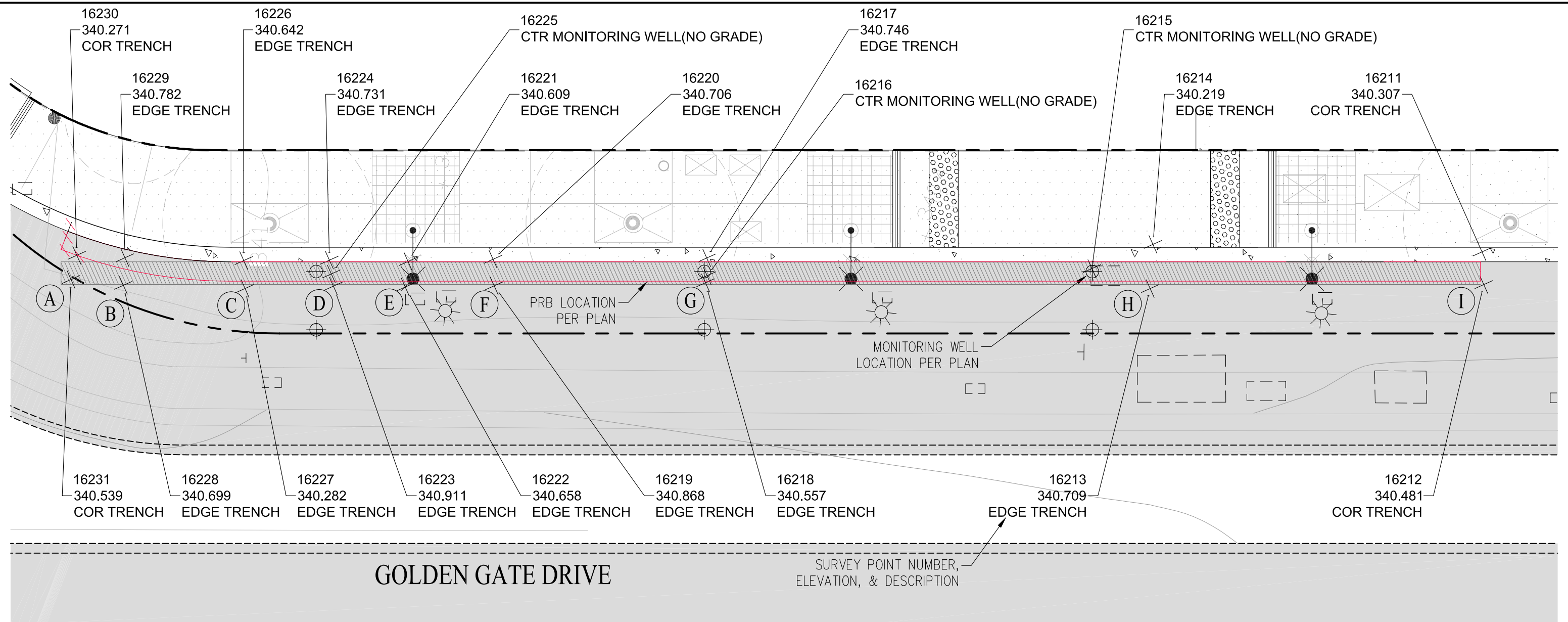
Magnus Pacific installed the Permeable Reactive Barrier at the 7544 Dublin Apartments Project in accordance with the Plans and Specifications and approved variances as noted in this completion report. Construction photographs are enclosed in Attachment L (submitted as a separate file) and in accordance with Article 1.9, Section 025010 of the Specifications, Magnus has also enclosed a performance warranty in Attachment M of this Completion Report.



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**ATTACHMENT A**



PRB Survey Plan and Profile As-Built



### AS BUILT PRB TRENCH WIDTH

LOCATION	WIDTH (FT)
A	2.54
B	2.85
C	2.88
D	2.67
E	2.63
F	2.73
G	2.55
H	4.55
I	3.37

### LEGEND

-  PRB LOCATION PER AMEC IMPROVEMENTS PLANS
-  APPROXIMATE SUBSURFACE PRB LOCATION AS CONSTRUCTED, SEE NOTE 2

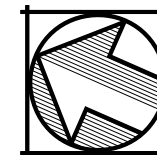
#### NOTES:

1. PRB AS-BUILT LOCATION, WIDTH, & ELEVATIONS ARE BEING SHOWN IN COMPARIOSON TO THE ULTIMATE BUILD OUT CONDITION FOR GOLDEN GATE DRIVE.
2. THE SURVEY REFLECTS THE EXPRESSION OF THE PRB TRENCH BACKFILL AT THE SURFACE, THE SHADED PRB LOCATION INDICATES THE ESTIMATED PRB LOCATION AT DEPTH.

## PRB AS BUILT 7544 DUBLIN BLVD

CITY OF DUBLIN ALAMEDA COUNTY CALIFORNIA

DATE: NOVEMBER, 2015  
SCALE: 1"=10'

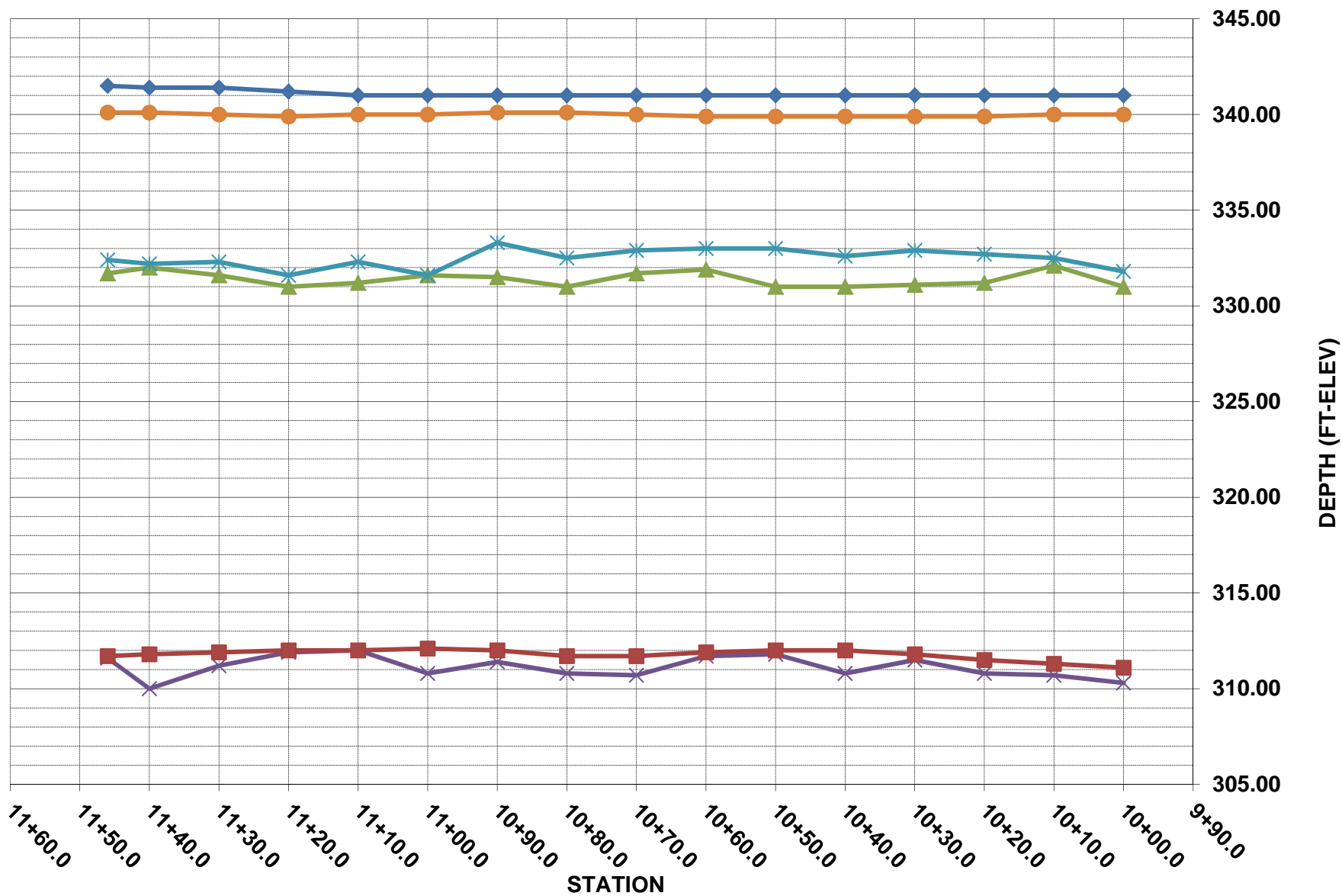
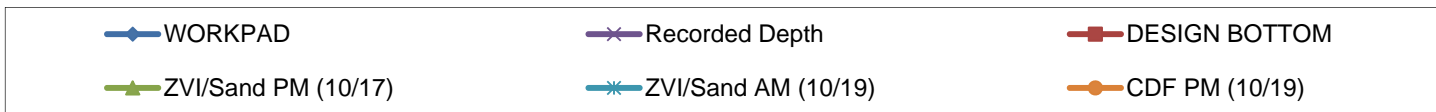


**cbg** Carlson, Barbee & Gibson, Inc.  
CIVIL ENGINEERS • SURVEYORS • PLANNERS

2633 CAMINO RAMON, SUITE 350  
SAN RAMON, CALIFORNIA 94583

(925) 866-0322  
www.cbandg.com

**DUBLIN APARTMENTS  
PERMEABLE REACTIVE BARRIER  
7544 DUBLIN BLVD, DUBLIN, CA  
10/19/15**





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**ATTACHMENT B**

Material Gradations and Hydraulic Conductivity Testing

**SUBMITTAL OF PLANS, SHOP DRAWINGS,  
EQUIPMENT DATA, MATERIAL, SAMPLES,  
OR MANUFACTURER'S CERTIFICATES**

DATE: Sept 25, 2015

SUBMITTAL NO. 003.1

**SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS**

TO: Mr. Sean R McKinley  
ZCon Builders  
780 W Grand Avenue  
Oakland CA 94612  
w: 510-444-4190  
c: 510-507-3591  
e: smckinley@zconbuilders.com

From: Mr. Tino B. Maestas, P.E.  
Magnus Pacific, LLC  
6558 Lonetree Blvd  
Rocklin, CA 95765  
Direct: 916-462-6419  
Cell: 916-471-8210  
email: tmaestas@magnuspacific.com

PROJECT NO. 150019

CHECK ONE:  
 THIS IS A NEW SUBMITTAL  
 THIS IS A RESUBMITTAL


SPECIFICATION SEC. NO.  
025010 - Permeable Reactive Barrier

PROJECT TITLE AND LOCATION  
7544 Dublin Apartments, Dublin, California

ITEM NO.	DESCRIPTION OF ITEM SUBMITTED (Type size, model number/etc.)	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See Instruction on B)	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION	FOR CLIENT USE
				SPEC. PARA.NO.	DRAWING SHEET NO.			
1	FINAL ZVI & Sand Pre-Construction Test Data		1	2.5(D)-(G)	N/A	A		

REMARKS

I have reviewed and approved the attached submittal(s) to ensure contract compliance. All quantities, dimensions, specific performance requirements, materials, catalog numbers and similar data have been verified as complete.

  
 9/25/2015  
 Tino B. Maestas, P.E.

**SECTION II - APPROVAL ACTION**

ENCLOSURES RETURNED (List by Item No.)

NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY

Date

**DATE:** September 24, 2015

**TO:** Tino Maestas  
Magnus Pacific Corporation  
6558 Lonetree Blvd.  
Rocklin, CA 95765

**JOB NO:** 2015.A111.100  
**LAB LOG:** 3953.0

e-mail: tmaestas@magnuspacific.com

**RE: Lab Report: PRB Wall, Dublin CA**

Enclosed are results for: Samples Received - September 4, 2015

Code	Item	Quantity
3050	Particle Size Analysis, Fine ASTM C-136	3
2150	Hydraulic Conductivity-Fixed-wall, 2-8" ASTM D-2434	4
1850	Dry Density / Moisture Content ASTM D-7263	4
4500	Void Ratio, Saturation & Porosity Determination	4

Thank you for consulting Geo-Logic Associates for your material testing requirements. We look forward to working with you again. If you have any questions or require any additional information, please call us at 1-530-272-2448. This testing is based upon accepted industry practice as well as the for the test method listed. These results apply only to the samples supplied and tested for the above referenced job. This report shall not be reproduced except in full without written approval of Geo-Logic Associates.

Sincerely,



Prepared By: Kindra Hillman  
Laboratory Manager



Reviewed By: Kenneth R. Criley  
Technical Director

# MIX SUMMARY



Client : Magnus Pacific Corporation

Project No: 2015.A111.100

Lab Log: **3953**

Project Name: PRB Wall, Dublin Ca

Report Date: September 23, 2015

DESCRIPTION	DENSITY pcf	VOLUME %	BLEND pcf	SPECIFIC GRAVITY	VOLUME FT <sup>3</sup>	BATCH VALUES	
						MASS %	MASS lb/ yd <sup>3</sup>
Zero Valent Iron	160	55	88	7.8	0.181	69	2376
# 20 Sand	88	45	39.6	2.7	0.235	31	1069
Voids					0.584 = 58.4% Porosity		
Totals		100	127.6		1.0	100	3445

Notes: \*\* Classifications are based on ASTM D-2487 when appropriate test results are available and per ASTM D-2488 when visual

*This testing is based upon accepted industry practice as well as the test method listed. These results apply only to the samples supplied and tested for the above referenced job.*



Client : Magnus Pacific Corporation

Project No: 2015.A111.100

Lab Log: **3953**

Project Name: PRB Wall Dublin, CA

Report Date: September 18, 2015

LSN	Sample ID	Soil Classification *	Water Content %	Dry Density pcf	Void Ratio	Porosity % **
A	Brown Sand	Lightly Compacted	0.6	107.4	0.57	36.3
A	Brown Sand	Loose		95.7	0.76	43.2
B	Silica Resource #20 Sand	Lightly Compacted	0.2	92.9	0.81	44.9
B	Silica Resource #20 Sand	Loose		83.2	1.03	50.7
C	Zero Valent Iron	Lightly Compacted	0.1	173.7	1.80	64.3
C	Zero Valent Iron	Loose		148.7	2.3	69.5
D	Blend	Lightly Compacted	0.1	124.0	2.1	68.1
D	Blend	Loose		128.3	2.0	67.0

Notes: \* Classifications are based on ASTM D-2487 when appropriate test results are available and per ASTM D-2488 when visual  
 \*\* Porosity based on specific gravities for Iron of 7.8 and sand of 2.7

*This testing is based upon accepted industry practice as well as the test method listed. These results apply only to the samples supplied and tested for the above referenced job.*

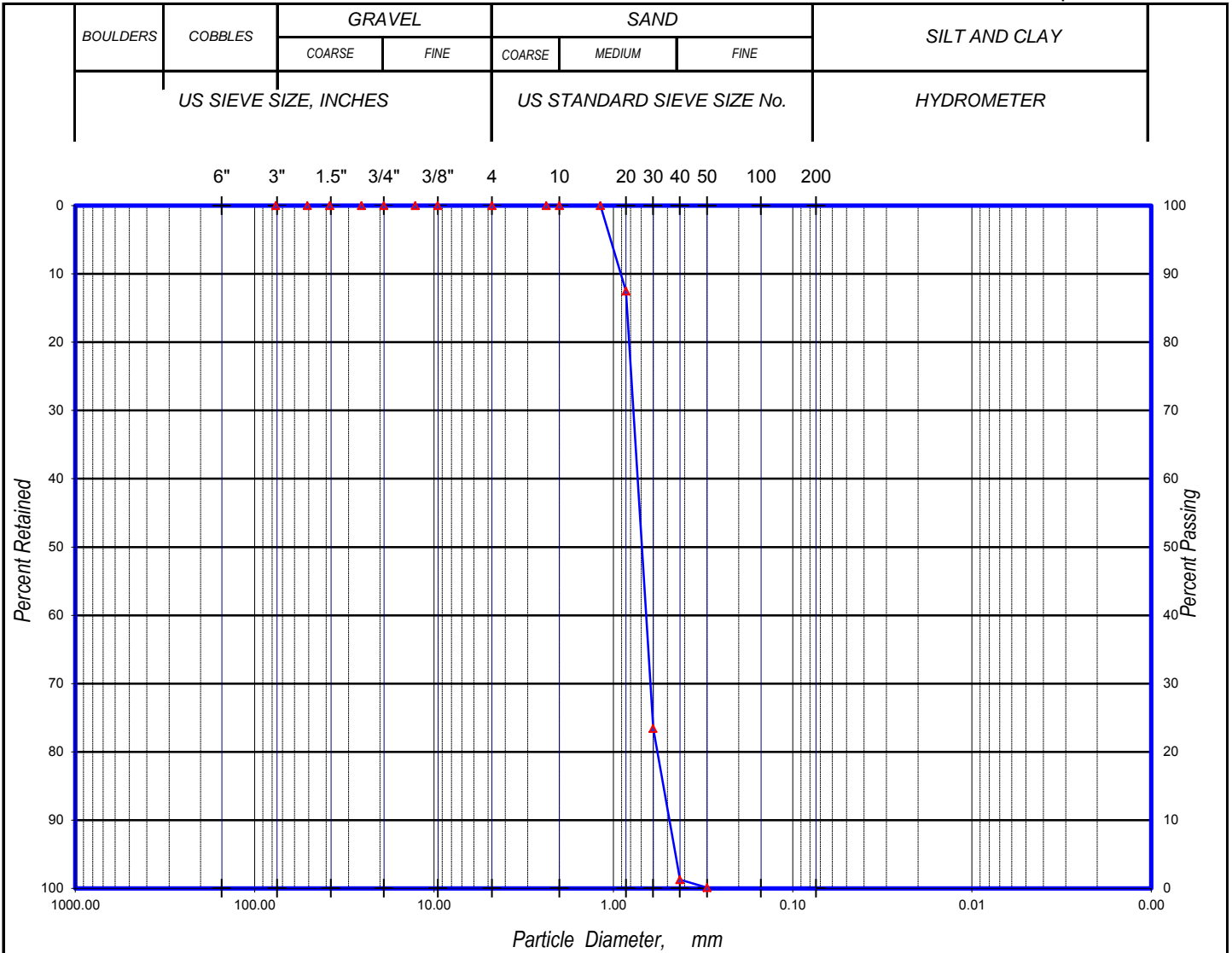
Client: **MAGNUS PACIFIC CORPORATION**

Project No: **2015.A111.100**

Lab Sample No: **3953B**

Project Name: **PRR WALL, DUBLIN CA**

Report Date: **September 11, 2015**



Symbol	Sample ID	Description	% Gravel	% Sand	% Silt - Clay
▲	Silica Resource Sand (9/4/15)	Brown Poorly Graded Sand (SP)	0.0	100.0	0.0

Size Passing, mm     $D_{60} = 0.74$      $D_{30} = 0.63$      $D_{10} = 0.49$   
 Coefficient of Curvature,  $C_c$ : 1.07    Coefficient of Uniformity,  $C_u$ : 1.50    Fineness Modulus = 2.77

Note: \* Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

This testing is based upon accepted industry practice as well as the test method listed. These results apply only to the samples supplied and tested for the above referenced job.

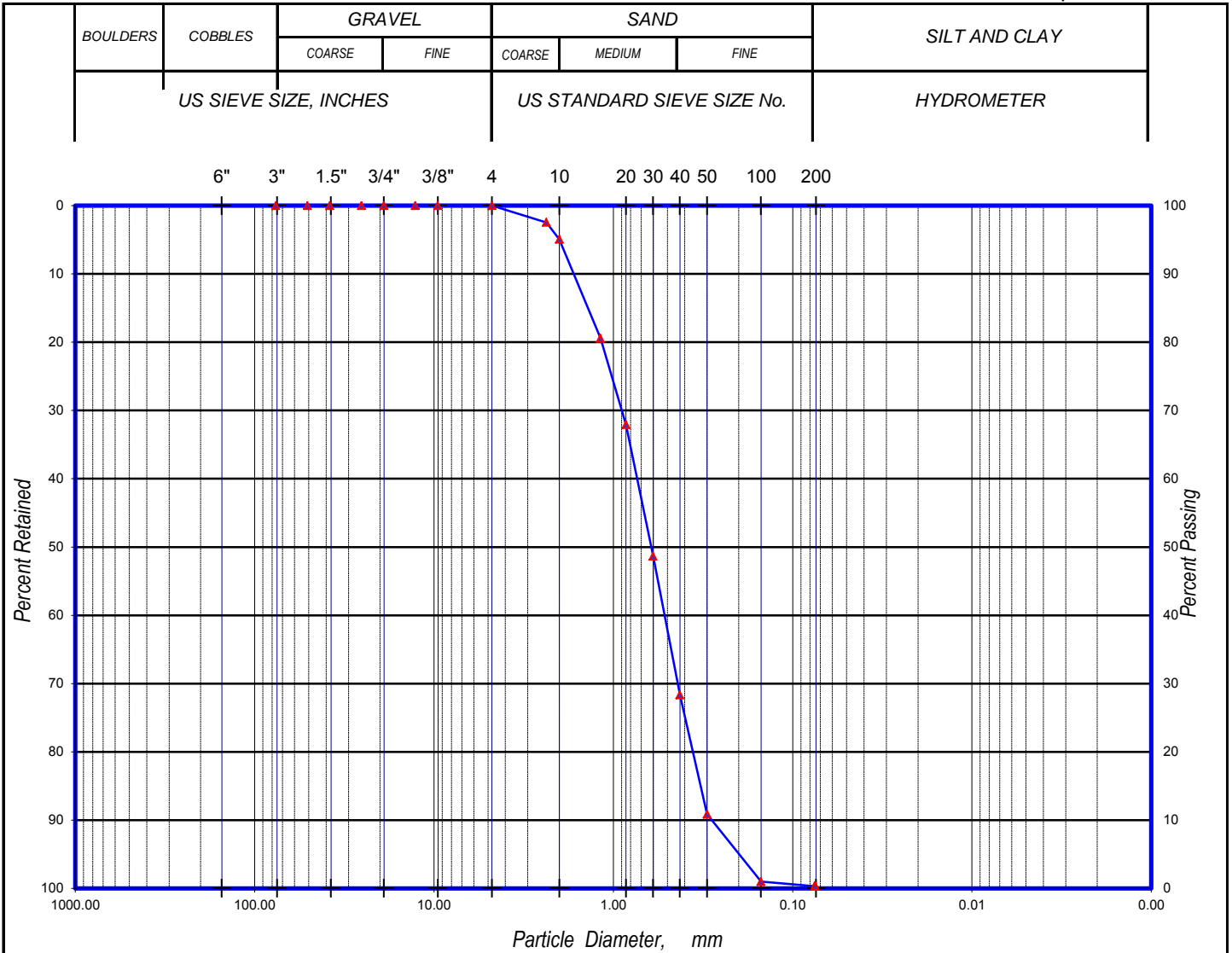
Client: **MAGNUS PACIFIC CORPORATION**

Project No: **2015.A111.100**

Lab Sample No: **3953C**

Project Name: **PRB WALL, DUBLIN CA**

Report Date: **September 16, 2015**



Symbol	Sample ID	Description	% Gravel	% Sand	% Silt - Clay
▲	# ETI CC-1004	Zero Valent Iron (ZVI)	0.0	99.7	0.3

Size Passing, mm    D<sub>60</sub> =    0.75    D<sub>30</sub> =    0.44    D<sub>10</sub> =    0.29  
 Coefficient of Curvature, C<sub>c</sub>:    0.90    Coefficient of Uniformity, C<sub>u</sub>:    2.61    Fineness Modulus =    2.61

Note: \* Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

*This testing is based upon accepted industry practice as well as the test method listed. These results apply only to the samples supplied and tested for the above referenced job.*

Client :  
Magnus Pacific Corporation

Project No:  
2015.A111.100

Lab Sample No:  
3953C

Project Name:  
PRB Wall, Dublin CA

Report Date:  
9/16/2015

**Sample Identification: # ETI CC-1004**

Sieve Size	Cumulative Percent Passing	Project Specification
4"		
3"		
2"		
1-1/2"		
1"		
3/4"		
1/2"		
3/8"		
#4	100.0	100
#8	97.5	95 - 100
#10	95.1	
#16	80.6	75 - 90
#20	67.9	
#30	48.6	25 - 45
#40	28.3	
#50	10.9	0 - 10
#100	1.0	0 - 5

*This testing is based upon accepted industry practice as well as the test method listed. These results apply only to the samples supplied and tested for the above referenced job.*

### FIXED WALL

ASTM D-2434, Modified

Client Name / Project Name:

Magnus Pacific Corporation / PRB Wall, Dublin CA

Project No.:

2015.A111.100

Lab Log:

3953B

Sample I.D.:

Silica Resource Sand

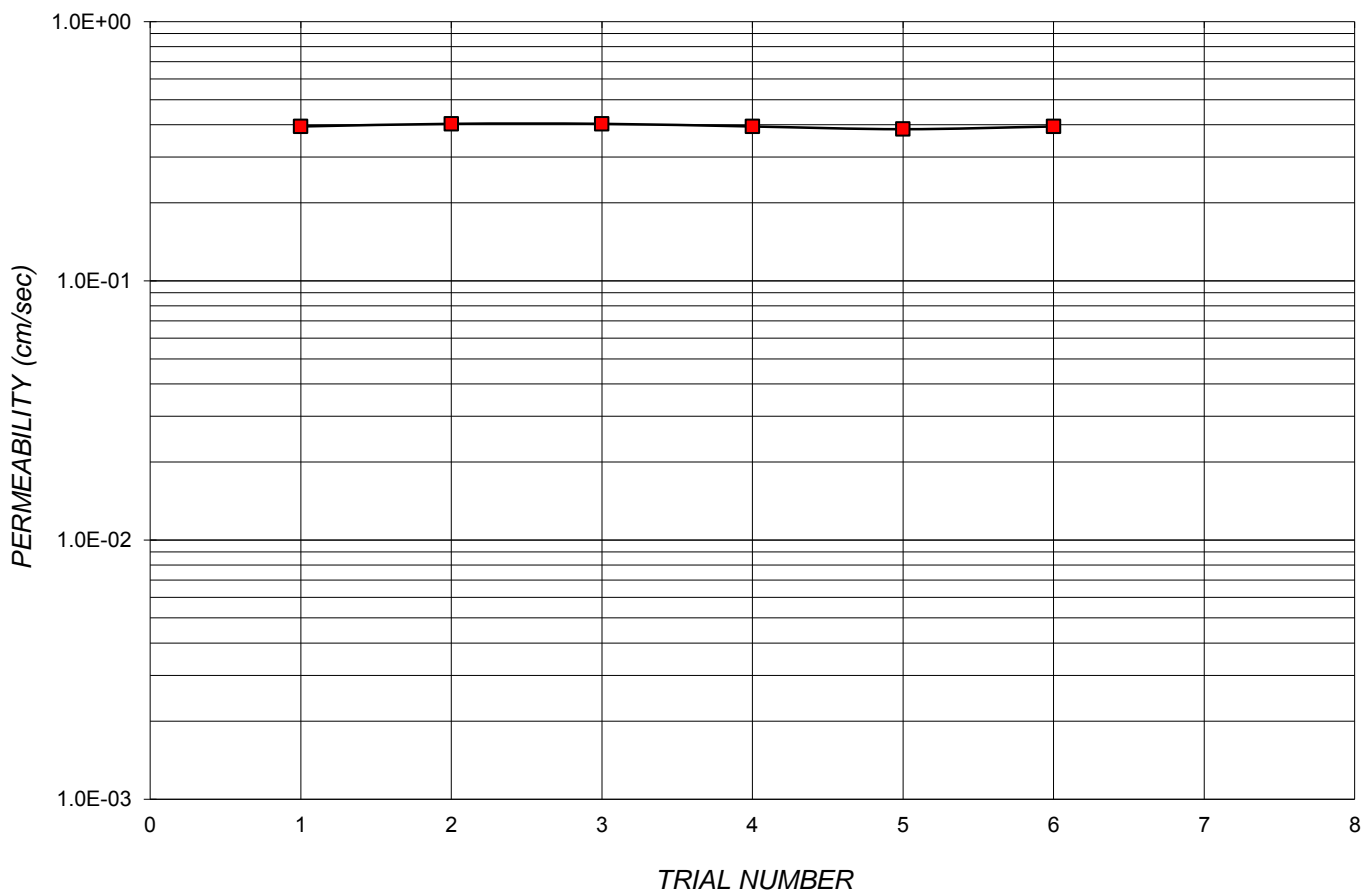
Description:

Light Brown Sand

Report Date:

September 17, 2015

TRIAL NUMBER	WATER CONTENT %	DRY DENSITY		HYDRAULIC CONDUCTIVITY cm / sec
		pcf	kg/m <sup>3</sup>	
Initial	0.5	91.2	1460	<p style="text-align: center;"><b><math>3.9E^{-1}</math> cm/s = 1120 ft/day</b></p>
1				
2				
3				
4				
5				
6	<p style="text-align: right;"><b>AVERAGE:</b></p>	<p style="text-align: center;"><b>3.9E-01</b></p>		
Final			27.8	



NOTES: 1) Test ran using 6 inch diameter fixed wall permeater. Sample Length = 11.4 cm  
 2) CONSTANT HEAD Average Head = 4cm

This testing is based upon accepted industry practice as well as the test method listed. These results apply only to the samples supplied and tested for the above referenced job.

### FIXED WALL

ASTM D-2434, Modified

Client Name / Project Name:  
Magnus Pacific / PRB Wall Dublin, CA

Project No.:  
2015.A111.100

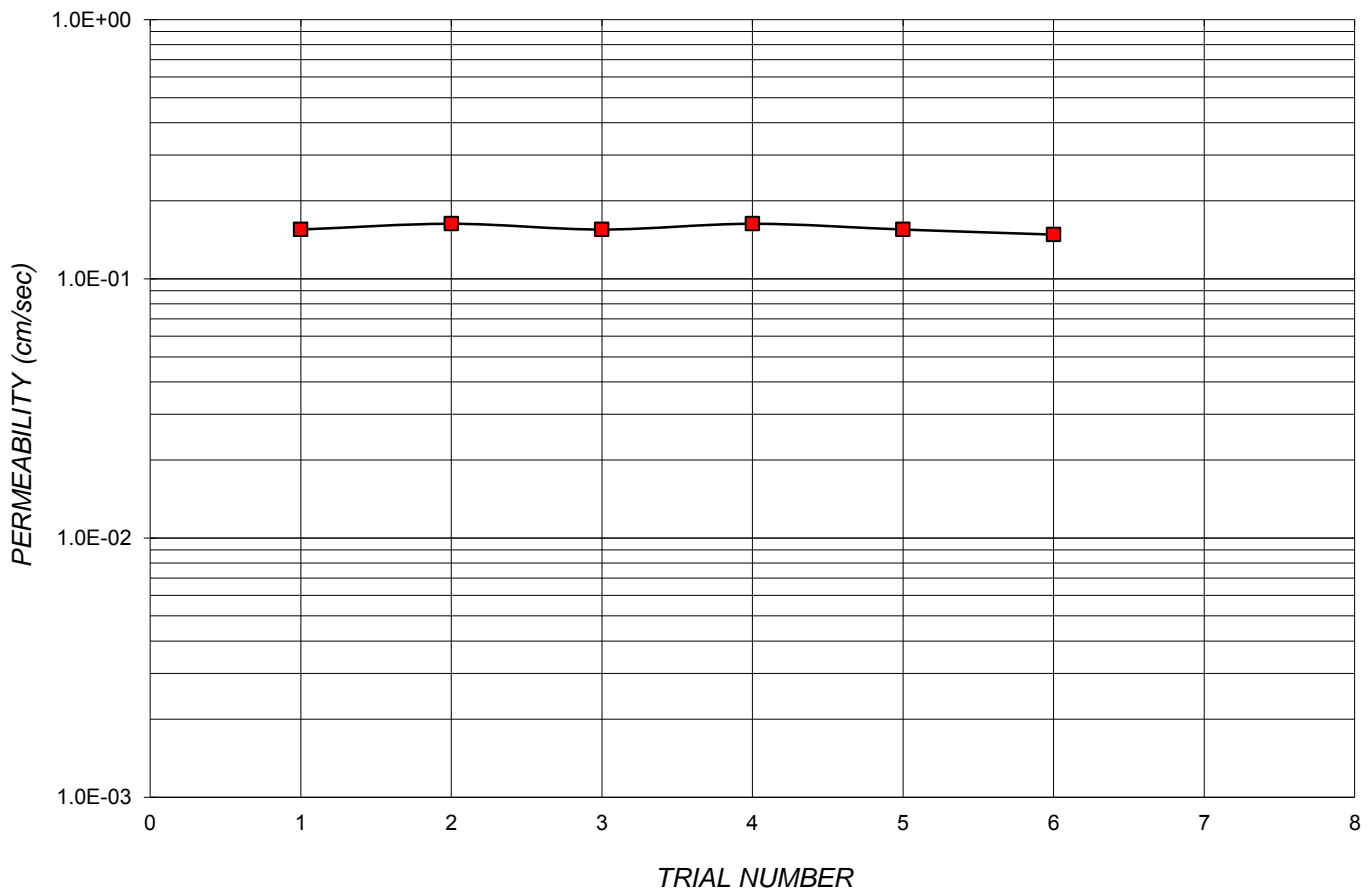
Lab Log:  
3953C

Sample I.D.:  
ETI CC-1004

Description:  
ZVI IRON

Report Date:  
September 18, 2015

TRIAL NUMBER	WATER CONTENT %	DRY DENSITY		HYDRAULIC CONDUCTIVITY cm / sec	
		pcf	kg/m <sup>3</sup>		
Initial	0.1		152.0	2434	
1		<b><math>1.6E^{-1}</math> cm/s = 440 ft/day</b>			1.5E-01
2					1.6E-01
3					1.5E-01
4					1.6E-01
5					1.5E-01
6					1.5E-01
Final	16.4	<b>AVERAGE:</b>			<b>1.6E-01</b>



NOTES: 1) Test ran using 6 inch diameter fixed wall permeater. Sample Length = 11.2 cm  
2) CONSTANT HEAD Average Head = 4.5cm

This testing is based upon accepted industry practice as well as the test method listed. These results apply only to the samples supplied and tested for the above referenced job.

### FIXED WALL

ASTM D-2434, Modified

Client Name / Project Name:

Magnus Pacific / PRB Wall Dublin, CA

Project No.:

2015.A111.100

Lab Log:

3953D

Sample I.D.:

Blend 45% #20 Sand w/ 55% ZVI

Description:

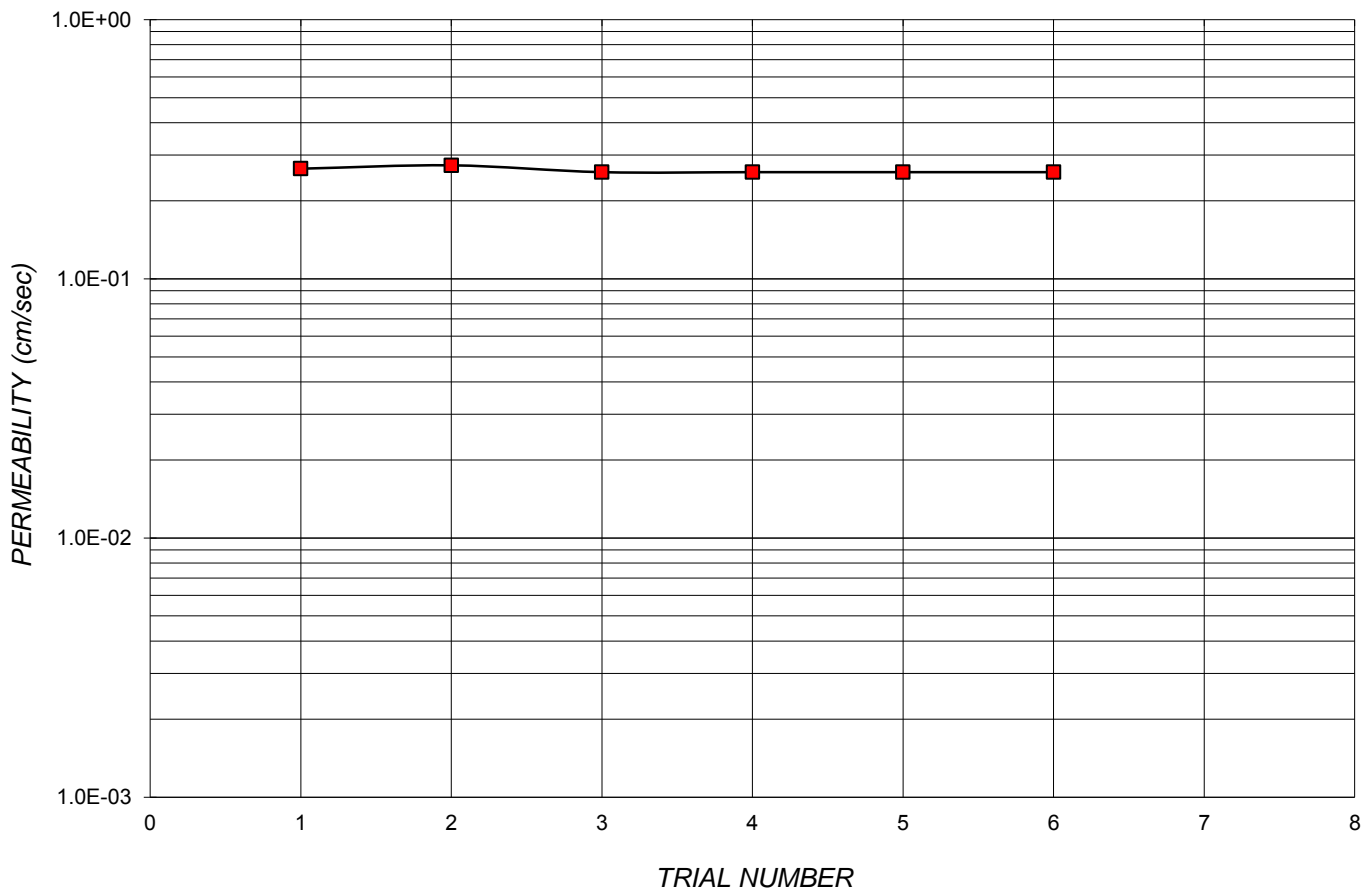
Sand and Iron

Report Date:

September 22, 2015

TRIAL NUMBER	WATER CONTENT %	DRY DENSITY		HYDRAULIC CONDUCTIVITY cm / sec
		pcf	kg/m <sup>3</sup>	
Initial	0.0			
1		128.3	2054	2.7E-01
2				2.7E-01
3				2.6E-01
4				2.6E-01
5				2.6E-01
6				2.6E-01
Final	21.4			<b>AVERAGE: 2.6E-01</b>

**$2.6E^{-1}$  cm/ s = 730 ft /day**



NOTES: 1) Test ran using 6 inch diameter fixed wall permeater. Sample Length = 11 cm  
2) CONSTANT HEAD Average Head = 4.5cm

This testing is based upon accepted industry practice as well as the test method listed. These results apply only to the samples supplied and tested for the above referenced job.

148.1481 density of Iron no compaction					
	pcf	% Vol	pcf each		
Iron	160	0.55	88		
Sand	88	0.45	39.6		
		1.00	127.6		
	pcf	Gs	Vol, ft3	% Mass	Batch grams
Air, (Porosity)			0.584 ( 58.4 % )		
Iron	88	486.954	0.181	69.0	3448
Sand	39.6	168.561	0.235	31.0	1552
	127.6		1.000	100.0	5000

4967

Average = 161.15

Average = 88.05

Weighted average, Gs = 5.505

0.584

### Batch Proportioning

	Batch Vol CY	Batch Vol CF	47%/53% CF	Weight LBS	Bags EA		
iron	5.89	159.03	74.96674	11994.68	4.00	at 3000-lb bulk bags	by mass 61.85% 38.15%
sand	5.89	159.03	84.06326	7397.567	3.70	at 2000-lb bulk bags	
			159.03	19392.25			
Trench Dimensions				121.9408			
L	146 ft						+/- 2% for batch testing
D	19 ft						1.24% 60.62% allowable variation for as-mix test
T	2.333333 ft						
Trench Vol	6472.667 CF						
# Batches	40.70 batches at 5.89-CY/batch						
# iron bags	163	ordered a total of 172.5 TN from Connelly and 111 TN from AMEC			283.5 TN		189 bags
# sand bags	151	ordered a total of 178 TN from Silica Resources Inc =			178 TN		178 bags

1.1 equivalent thickness  
2.333333 bucket width in feet  
47.14% iron by volume





---

**ATTACHMENT C**

Connelly-GPM, Inc. Iron Aggregate Certificate of Analysis



# CONNELLY – GPM, INC.

ESTABLISHED 1875

3154 SOUTH CALIFORNIA AVENUE CHICAGO, ILLINOIS 60608-5176  
PHONE: (773) 247-7231 • [www.ConnellyGPM.com](http://www.ConnellyGPM.com) • FAX: (773) 247-7239

## CERTIFICATE OF ANALYSIS

**CUSTOMER:** MAGNUS PACIFIC  
**SHIPPING ORDER #:** 12866  
**PRODUCT:** IRON AGGREGATE ETI CC-1004  
**QUANTITY:** 15-3000 LB. BAGS  
**LOAD I.D.:** 1 OF 7, 87705  
**DATE SHIPPED:** 10/1/2015

THIS IS TO CERTIFY THAT THE ABOVE TRUCKLOAD OF IRON AGGREGATE ETI CC-1004 HAS BEEN TESTED AND FOUND TO CONFORM TO THE PRODUCT SPECIFICATIONS LISTED BELOW.

<u>U.S. STANDARD SIEVE SIZE</u>	<u>SPECIFICATION % PASSING BY WEIGHT</u>	<u>SAMPLE PASSED</u>
NUMBER 4	100%	<input checked="" type="checkbox"/>
NUMBER 8	95-100	<input checked="" type="checkbox"/>
NUMBER 16	75-90	<input checked="" type="checkbox"/>
NUMBER 30	25-45	<input checked="" type="checkbox"/>
NUMBER 50	0-10	<input checked="" type="checkbox"/>
NUMBER 100	0-5	<input checked="" type="checkbox"/>

**BULK DENSITY (SPECIFICATION: 140-160#/CU FT):**

Yes

**MATERIAL FREE OF OIL/GREASE (TAKES WATER READILY):**

Yes

**MINERALOGY OF FILINGS AT LEAST 85% BY WEIGHT METALLIC IRON:**

Yes

  
 Galen B. Dixon, Technical Director

*m*



# CONNELLY – GPM, INC.

ESTABLISHED 1875

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PHONE: (773) 247-7231 • [www.ConnellyGPM.com](http://www.ConnellyGPM.com) • FAX: (773) 247-7239

## CERTIFICATE OF ANALYSIS

**CUSTOMER:** MAGNUS PACIFIC  
**SHIPPING ORDER #:** 12866  
**PRODUCT:** IRON AGGREGATE ETI CC-1004  
**QUANTITY:** 15-3000 LB. BAGS  
**LOAD I.D.:** 2 OF 7, 87706  
**DATE SHIPPED:** 10/1/2015

THIS IS TO CERTIFY THAT THE ABOVE TRUCKLOAD OF IRON AGGREGATE ETI CC-1004 HAS BEEN TESTED AND FOUND TO CONFORM TO THE PRODUCT SPECIFICATIONS LISTED BELOW.

<u>U.S. STANDARD SIEVE SIZE</u>	<u>SPECIFICATION % PASSING BY WEIGHT</u>	<u>SAMPLE PASSED</u>
NUMBER 4	100%	<input checked="" type="checkbox"/>
NUMBER 8	95-100	<input checked="" type="checkbox"/>
NUMBER 16	75-90	<input checked="" type="checkbox"/>
NUMBER 30	25-45	<input checked="" type="checkbox"/>
NUMBER 50	0-10	<input checked="" type="checkbox"/>
NUMBER 100	0-5	<input checked="" type="checkbox"/>

**BULK DENSITY (SPECIFICATION: 140-160#/CU FT):**

**MATERIAL FREE OF OIL/GREASE (TAKES WATER READILY):**

**MINERALOGY OF FILINGS AT LEAST 85% BY WEIGHT METALLIC IRON:**

Yes  
Yes  
Yes

Galen B. Dixon, Technical Director

*m*



# CONNELLY – GPM, INC.

ESTABLISHED 1875

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## CERTIFICATE OF ANALYSIS

**CUSTOMER:** MAGNUS PACIFIC  
**SHIPPING ORDER #:** 12866  
**PRODUCT:** IRON AGGREGATE ETI CC-1004  
**QUANTITY:** 15-3000 LB. BAGS  
**LOAD I.D.:** 3 OF 7, 87726  
**DATE SHIPPED:** 10/1/2015

THIS IS TO CERTIFY THAT THE ABOVE TRUCKLOAD OF IRON AGGREGATE ETI CC-1004 HAS BEEN TESTED AND FOUND TO CONFORM TO THE PRODUCT SPECIFICATIONS LISTED BELOW.

<u>U.S. STANDARD SIEVE SIZE</u>	<u>SPECIFICATION % PASSING BY WEIGHT</u>	<u>SAMPLE PASSED</u>
NUMBER 4	100%	<input checked="" type="checkbox"/>
NUMBER 8	95-100	<input checked="" type="checkbox"/>
NUMBER 16	75-90	<input checked="" type="checkbox"/>
NUMBER 30	25-45	<input checked="" type="checkbox"/>
NUMBER 50	0-10	<input checked="" type="checkbox"/>
NUMBER 100	0-5	<input checked="" type="checkbox"/>

**BULK DENSITY (SPECIFICATION: 140-160#/CU FT):**

**MATERIAL FREE OF OIL/GREASE (TAKES WATER READILY):**

**MINERALOGY OF FILINGS AT LEAST 85% BY WEIGHT METALLIC IRON:**

yes  
yes  
yes

Galen B. Dixon, Technical Director



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## CERTIFICATE OF ANALYSIS

**CUSTOMER:** MAGNUS PACIFIC  
**SHIPPING ORDER #:** 12866  
**PRODUCT:** IRON AGGREGATE ETI CC-1004  
**QUANTITY:** 15-3000 LB. BAGS  
**LOAD I.D.:** 4 OF 7, 87736  
**DATE SHIPPED:** 10/2/2015

THIS IS TO CERTIFY THAT THE ABOVE TRUCKLOAD OF IRON AGGREGATE ETI CC-1004 HAS BEEN TESTED AND FOUND TO CONFORM TO THE PRODUCT SPECIFICATIONS LISTED BELOW.

<u>U.S. STANDARD SIEVE SIZE</u>	<u>SPECIFICATION % PASSING BY WEIGHT</u>	<u>SAMPLE PASSED</u>
NUMBER 4	100%	<input checked="" type="checkbox"/>
NUMBER 8	95-100	<input checked="" type="checkbox"/>
NUMBER 16	75-90	<input checked="" type="checkbox"/>
NUMBER 30	25-45	<input checked="" type="checkbox"/>
NUMBER 50	0-10	<input checked="" type="checkbox"/>
NUMBER 100	0-5	<input checked="" type="checkbox"/>

**BULK DENSITY (SPECIFICATION: 140-160#/CU FT):**

**MATERIAL FREE OF OIL/GREASE (TAKES WATER READILY):**

**MINERALOGY OF FILINGS AT LEAST 85% BY WEIGHT METALLIC IRON:**

yes  
yes  
yes

  
 Galen B. Dixon, Technical Director

*mu*



# CONNELLY – GPM, INC.

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## CERTIFICATE OF ANALYSIS

**CUSTOMER:** MAGNUS PACIFIC  
**SHIPPING ORDER #:** 12866  
**PRODUCT:** IRON AGGREGATE ETI CC-1004  
**QUANTITY:** 15-3000 LB. BAGS  
**LOAD I.D.:** 5 OF 7, 87735  
**DATE SHIPPED:** 10/2/2015

THIS IS TO CERTIFY THAT THE ABOVE TRUCKLOAD OF IRON AGGREGATE ETI CC-1004 HAS BEEN TESTED AND FOUND TO CONFORM TO THE PRODUCT SPECIFICATIONS LISTED BELOW.

<u>U.S. STANDARD SIEVE SIZE</u>	<u>SPECIFICATION % PASSING BY WEIGHT</u>	<u>SAMPLE PASSED</u>
NUMBER 4	100%	<input checked="" type="checkbox"/>
NUMBER 8	95-100	<input checked="" type="checkbox"/>
NUMBER 16	75-90	<input checked="" type="checkbox"/>
NUMBER 30	25-45	<input checked="" type="checkbox"/>
NUMBER 50	0-10	<input checked="" type="checkbox"/>
NUMBER 100	0-5	<input checked="" type="checkbox"/>

**BULK DENSITY (SPECIFICATION: 140-160#/CU FT):**

**MATERIAL FREE OF OIL/GREASE (TAKES WATER READILY):**

**MINERALOGY OF FILINGS AT LEAST 85% BY WEIGHT METALLIC IRON:**

*yes*  
 \_\_\_\_\_  
*yes*  
 \_\_\_\_\_  
*yes*  
 \_\_\_\_\_

*Galen B. Dixon*  
 \_\_\_\_\_

Galen B. Dixon, Technical Director



# CONNELLY – GPM, INC.

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## CERTIFICATE OF ANALYSIS

**CUSTOMER:** MAGNUS PACIFIC  
**SHIPPING ORDER #:** 12866  
**PRODUCT:** IRON AGGREGATE ETI CC-1004  
**QUANTITY:** 15-3000 LB. BAGS  
**LOAD I.D.:** 6 OF 7, 87781  
**DATE SHIPPED:** 10/6/2015

THIS IS TO CERTIFY THAT THE ABOVE TRUCKLOAD OF IRON AGGREGATE ETI CC-1004 HAS BEEN TESTED AND FOUND TO CONFORM TO THE PRODUCT SPECIFICATIONS LISTED BELOW.

<u>U.S. STANDARD SIEVE SIZE</u>	<u>SPECIFICATION % PASSING BY WEIGHT</u>	<u>SAMPLE PASSED</u>
NUMBER 4	100%	<input checked="" type="checkbox"/>
NUMBER 8	95-100	<input checked="" type="checkbox"/>
NUMBER 16	75-90	<input checked="" type="checkbox"/>
NUMBER 30	25-45	<input checked="" type="checkbox"/>
NUMBER 50	0-10	<input checked="" type="checkbox"/>
NUMBER 100	0-5	<input checked="" type="checkbox"/>

**BULK DENSITY (SPECIFICATION: 140-160#/CU FT):**

yes

**MATERIAL FREE OF OIL/GREASE (TAKES WATER READILY):**

yes

**MINERALOGY OF FILINGS AT LEAST 85% BY WEIGHT METALLIC IRON:**

yes

  
 Galen B. Dixon, Technical Director



# CONNELLY – GPM, INC.

ESTABLISHED 1875

3154 SOUTH CALIFORNIA AVENUE CHICAGO, ILLINOIS 60608-5176  
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## CERTIFICATE OF ANALYSIS

**CUSTOMER:** MAGNUS PACIFIC  
**SHIPPING ORDER #:** 12866  
**PRODUCT:** IRON AGGREGATE ETI CC-1004  
**QUANTITY:** 10-3000 LB. BAGS  
**LOAD I.D.:** 7 OF 7, 87777  
**DATE SHIPPED:** 10/7/2015

THIS IS TO CERTIFY THAT THE ABOVE TRUCKLOAD OF IRON AGGREGATE ETI CC-1004 HAS BEEN TESTED AND FOUND TO CONFORM TO THE PRODUCT SPECIFICATIONS LISTED BELOW.

<u>U.S. STANDARD SIEVE SIZE</u>	<u>SPECIFICATION % PASSING BY WEIGHT</u>	<u>SAMPLE PASSED</u>
NUMBER 4	100%	<input checked="" type="checkbox"/>
NUMBER 8	95-100	<input checked="" type="checkbox"/>
NUMBER 16	75-90	<input checked="" type="checkbox"/>
NUMBER 30	25-45	<input checked="" type="checkbox"/>
NUMBER 50	0-10	<input checked="" type="checkbox"/>
NUMBER 100	0-5	<input checked="" type="checkbox"/>

**BULK DENSITY (SPECIFICATION: 140-160#/CU FT):**

**MATERIAL FREE OF OIL/GREASE (TAKES WATER READILY):**

**MINERALOGY OF FILINGS AT LEAST 85% BY WEIGHT METALLIC IRON:**

*Yes*  


---

*Yes*  


---

*yes*  


---

Galen B. Dixon, Technical Director





# CONNELLY – GPM, INC.

ESTABLISHED 1875

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## CERTIFICATE OF ANALYSIS

**CUSTOMER:** MAGNUS PACIFIC  
**SHIPPING ORDER #:** 12877  
**PRODUCT:** IRON AGGREGATE ETI CC-1004  
**QUANTITY:** 15-3000 LB. BAGS  
**LOAD I.D.:** 1 OF 1, 87815  
**DATE SHIPPED:** 10/7/2015

THIS IS TO CERTIFY THAT THE ABOVE TRUCKLOAD OF IRON AGGREGATE ETI CC-1004 HAS BEEN TESTED AND FOUND TO CONFORM TO THE PRODUCT SPECIFICATIONS LISTED BELOW.

<u>U.S. STANDARD SIEVE SIZE</u>	<u>SPECIFICATION % PASSING BY WEIGHT</u>	<u>SAMPLE PASSED</u>
NUMBER 4	100%	<input checked="" type="checkbox"/>
NUMBER 8	95-100	<input checked="" type="checkbox"/>
NUMBER 16	75-90	<input checked="" type="checkbox"/>
NUMBER 30	25-45	<input checked="" type="checkbox"/>
NUMBER 50	0-10	<input checked="" type="checkbox"/>
NUMBER 100	0-5	<input checked="" type="checkbox"/>

**BULK DENSITY (SPECIFICATION: 140-160#/CU FT):**

**MATERIAL FREE OF OIL/GREASE (TAKES WATER READILY):**

**MINERALOGY OF FILINGS AT LEAST 85% BY WEIGHT METALLIC IRON:**

Yes  
Yes  
yes

Galen B. Dixon, Technical Director



# CONNELLY – GPM, INC.

ESTABLISHED 1875

3154 SOUTH CALIFORNIA AVENUE CHICAGO, ILLINOIS 60608-5176  
PHONE: (773) 247-7231 • [www.ConnellyGPM.com](http://www.ConnellyGPM.com) • FAX: (773) 247-7239

August 5, 2014

Via UPS Ground

Mr. Brent O'Dell  
AMEC  
200 American Metro Blvd.  
Suite 113  
Hamilton, NJ 08619

**Re: Sample Iron Aggregate ETI CC-1004 and Quality Control Report**

Dear Brent,

Enclosed is 20 lbs. of our Iron Aggregate ETI CC-1004 extracted from the production run of your 1,375.5NT for Haledon, NJ. I've also included a Screen Specification for this material, an MSDS for Iron Aggregate, and some pens for your use (great little pocket pens!). The Quality Control Report is being sent under separate cover, via e-mail.

The Quality Control Report certifies that the Iron Aggregate ETI CC-1004 produced for your Haledon, NJ site is within the specification for particle size distribution, bulk density, oil and grease content, and percentage of iron (note: we did not have another analysis run for current carbon content, but past analyses have put it around 3%).

If there's anything further you need, please let me know.

Kindest regards,

**CONNELLY-GPM, INC.**  
**THE IRON AGGREGATE PEOPLE™**

Amy Marchefka  
Sales Manager

Enclosures

c: Mr. Pat Pontoriero

D:\WORD\WT\AthruD\AMEC\20-lb 1004 Sample



# CONNELLY – GPM, INC.

ESTABLISHED 1875

3154 SOUTH CALIFORNIA AVENUE CHICAGO, ILLINOIS 60608-5176  
PHONE: (773) 247-7231 • [www.ConnellyGPM.com](http://www.ConnellyGPM.com) • FAX: (773) 247-7239

August 8, 2014

## Current Production Sample Analysis ETI CC-1004

### Sieve Analysis Results

U.S. SCREEN NUMBER (Opening Size)		SPECIFICATION	SAMPLE TEST RESULTS
4	(4.75 mm)	100% PASSING	100%
8	(2.36 mm)	95 - 100% PASSING	97.5
16	(1.18 mm)	75 - 90	75.9
30	(0.600 mm)	25 - 45	37.9
50	(0.300 mm)	0 - 10	7.3
100	(0.150 mm)	0 - 5	0.6

**MATERIAL WEIGHS APPROXIMATELY 159 POUNDS PER CUBIC FOOT**

Metallic Iron as determined by spectral analysis	87-93%
Metallic Iron as determined by dissolution in HCl	89.0%
Oil and Grease content as determined by Hexane Extraction	10 mg/kg*

\*(10 ppmw is the smallest unit of detection. Actual results appeared to be between 0 and 10.)

GALEN B. DIXON  
Technical Director

*Jmw*  
8/8/2014



---

**ATTACHMENT D**

Mirafi 180 NC Geotextile Product Data Sheet



**PACKING SLIP**

**18464996**

018 - Dublin  
 6341 Scarlett Court  
 Dublin, CA, 94568  
 (925) 833-9200

**Sold** 126996000  
**To:** MAGNUS PACIFIC CORP  
 6558 LONETREE BLVD  
 ROCKLIN, CA, 95765  
 916-233-1137



Delivery : 3937385

**Ship To:** DUBLIN APARTMENTS, 10000890314  
 7544 DUBLIN BLVD  
 DUBLIN, CA, 94568  
**Job Site Contact:** TINO MAESTAS  
**Job Site Phone:** 916-471-8210  
**Map #:**

**Printed By :** SAMUEL TENNELL

**Printed Date :** 10/15/2015 12:23 PM PACIFIC

**Ordered By :** TINO MAESTAS

**Contact Ph# :** 916-471-8210

Order Number	Order Date	Request Date	Customer PO	Terms	Ship via/Routing	Sales Person	Created By	
18464996	10/14/2015	10/15/2015	TINO / MARC	N30D	2. Our Truck	Brooks, D	Reed, D	
LN	Part#	Description	Quantity	U/M	Price	Amount		
Bin	H/M	LOT / S/N	ORD	SHP	BKO	Unit WT	COO	Applied
1	157R180NC15	ROLL 180NC 15'X300'	1	1	0	RL		
1-YARD1	VPN: 180NC/15/300	4500SF MIRAFI				250 LBS		

\*\*\*\*\*PACKING SLIP ONLY\*\*\*\*\*  
 \*\*\*\*\* THIS IS NOT AN INVOICE \*\*\*\*\*  
 REPORT DISCREPANCIES WITHIN 24 HRS.  
 IF YOU DIDN'T RECEIVE THE SERVICE YOU EXPECTED CALL JAMES JACKSON (916) 997-9524  
 NO REFUNDS OR EXCHANGES ON NON STOCK MERCHANDISE  
 SEE REVERSE SIDE FOR TERMS AND CONDITIONS  
[WWW.WHITECAP.COM](http://WWW.WHITECAP.COM)

PRINT: \_\_\_\_\_ SIGN : \_\_\_\_\_

SHIPPED WEIGHT: 250.00 LBS PULLED BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ LOADED BY: \_\_\_\_\_

# Mirafi® 180NC



Mirafi® 180NC is a needlepunched nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. Mirafi® 180NC is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids. Mirafi® 180NC meets AASHTO M288-06 Class 1 for Elongation > 50%.

TenCate Geosynthetics Americas Laboratories are accredited by [a2La](#) (The American Association for Laboratory Accreditation) and Geosynthetic Accreditation Institute – Laboratory Accreditation Program ([GAI-LAP](#)).

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Weight	ASTM D5261	oz/yd <sup>2</sup> (g/m <sup>2</sup> )	7.5 (254)	
Grab Tensile Strength	ASTM D4632	lbs (N)	205 (912)	205 (912)
Grab Tensile Elongation	ASTM D4632	%	50	50
Trapezoid Tear Strength	ASTM D4533	lbs (N)	80 (356)	80 (356)
CBR Puncture Strength	ASTM D6241	lbs (N)	550 (2447)	
Apparent Opening Size (AOS) <sup>1</sup>	ASTM D4751	U.S. Sieve (mm)	80 (0.18)	
Permittivity	ASTM D4491	sec <sup>-1</sup>	1.0	
Flow Rate	ASTM D4491	gal/min/ft <sup>2</sup> (l/min/m <sup>2</sup> )	70 (2852)	
UV Resistance (at 500 hours) <sup>2</sup>	ASTM D4355	% strength retained	70	

<sup>1</sup> ASTM D4751: AOS is a Maximum Opening Diameter Value

<sup>2</sup> Modified

Physical Properties	Unit	Typical Value <sup>3</sup>	
Roll Dimensions (width x length)	ft (m)	12.5 x 360 (3.8 x 110)	15 x 300 (4.57 x 91.4)
Roll Area	yd <sup>2</sup> (m <sup>2</sup> )	500 (418)	
Estimated Roll Weight	lb (kg)	262 (119)	

<sup>3</sup> ASTM D4439 Standard Terminology for Geosynthetics: typical value, *n—for geosynthetics*, the mean value calculated from documented manufacturing quality control test results for a defined population obtained from one test method associated with on specific property.

**Disclaimer:** TenCate assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. TenCate disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, materials, or information furnished herewith. This document should not be construed as engineering advice.

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365 South Holland Drive  
Pendergrass, GA 30567

Tel 706 693 2226  
Tel 888 795 0808

Fax 706 693 4400  
[www.tencate.com](http://www.tencate.com)



FGS000760  
ETQR3



GAI-LAP-25-97

Testing Lab 1291.01 & 1291.02



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**ATTACHMENT E**

CDF Mix Design and Delivery Batch Tickets

**SUBMITTAL OF PLANS, SHOP DRAWINGS,  
EQUIPMENT DATA, MATERIAL, SAMPLES,  
OR MANUFACTURER'S CERTIFICATES**

DATE: October 10, 2015

SUBMITTAL NO. 312310-0001-01

**SECTION I - REQUEST FOR APPROVAL OF THE FOLLOWING ITEMS**

TO: Mr. Sean R McKinley  
ZCon Builders  
780 W Grand Avenue  
Oakland CA 94612  
w: 510-444-4190  
c: 510-507-3591  
e: smckinley@zconbuilders.com

From: Mr. Tino B. Maestas, P.E.  
Magnus Pacific, LLC  
6558 Lonetree Blvd  
Rocklin, CA 95765  
Direct: 916-462-6419  
Cell: 916-471-8210  
email: tmaestas@magnuspacific.com

PROJECT NO. 150019

CHECK ONE:  
 THIS IS A NEW SUBMITTAL  
 THIS IS A RESUBMITTAL


SPECIFICATION SEC. NO.  
31 23 10 Excavation for Remediation

PROJECT TITLE AND LOCATION  
7544 Dublin Apartments, Dublin, California

ITEM NO.	DESCRIPTION OF ITEM SUBMITTED (Type size, model number/etc.)	MFG OR CONTR. CAT., CURVE DRAWING OR BROCHURE NO. (See Instruction on B)	NO. OF COPIES	CONTRACT REFERENCE DOCUMENT		FOR CONTRACTOR USE CODE	VARIATION	FOR CLIENT USE
				SPEC. PARA.NO.	DRAWING SHEET NO.			
1	Revised CDF Mix Design		1	1.5.B	N/A	A		
2	CDF Material Certifications		1	1.5.C	N/A	A		

REMARKS

I have reviewed and approved the attached submittal(s) to ensure contract compliance. All quantities, dimensions, specific performance requirements, materials, catalog numbers and similar data have been verified as complete.

  
 10/12/2015  
 Tino B. Maestas, P.E.

**SECTION II - APPROVAL ACTION**

ENCLOSURES RETURNED (List by Item No.)

NAME, TITLE AND SIGNATURE OF APPROVING AUTHORITY

Date





<b>CUSTOMER :</b> <b>MAGNUS PACIFIC</b>		<b>DATE :</b> 11.12.15			
		<b>MIX # RC CDF1F</b>			
		<b>CONCRETE DESCRIPTION</b>			
<b>JOB DESCRIPTION :</b>		<b>1 SACK CDF</b>			
		100 psi 28 DAY STRENGTH ( f ' c )			
<b>DUBLIN APARTMENTS</b>		1 SACK CEMENTIOUS MATERIAL			
<b>DUBLIN, CA.</b>		# 4 MAX AGGREGATE			
		6 " SLUMP +- 1"			
		3.63 W/C RATIO			
<b>DESCRIPTION OF MATERIALS</b>					
TEICHERT MATERIALS	CLASS II CONCRETE SAND ASTM C-33				
CA. PORTLAND	TYPE II / V L/A PORTLAND CEMENT ASTM C-150				
HEADWATERS RESOURCES	CLASS F FLYASH ASTM C-618				
MASTER BUILDERS	322N WATER REDUCER ASTM C-494 TYPE A				
<b>MATERIAL</b>	<b>SOLID VOLUME</b>		<b>Sp.GR X 62.4</b>	<b>SSD QUANTITY</b>	
			<b>lb/cu.ft.</b>		
CLASS II TOP SAND	20.29	cf	165.4		3356 lbs.
PORTLAND TYPE II	0.22	cf	196.6		44 lbs.
TYPE F FLYASH	0.35	cf	142.86		50 lbs.
WATER gal <b>41</b>	5.47	cf	62.45	8.33	342 lbs.
AIR % <b>2.50</b>	0.67	cf	3.66		
MBT 322N	0	cf	0		6 ozs.
<b>TOTALS</b>		<b>27.00 cf</b>			<b>3792 lbs.</b>
<b>SPECIAL INSTRUCTIONS :</b>					
1 > SLUMP SHALL BE FLOWABLE					

## TEICHERT MATERIALS

### Material Evaluation

Plant: Vernalis

SMARA # 91-39-0021

Product: Concrete Sand

Grading & SE represent averages from testing dates of 7-1-14 to 9-30-14

Sieve Size		Percent Passing	Specific Gravity	ASTM C-128
75mm	3"			
63mm	2 1/2"		Bulk SSD	2.647
50mm	2"			
37.5mm	1 1/2"			
25mm	1"			
19mm	3/4"		Absorption %	1.8
12.5mm	1/2"		Soil pH ASTM D4972	8.8
9.5mm	3/8"	100	Resistivity min ohm-cm	10,450
4.75mm	#4	99	Chloride ppm	10.3
2.36mm	#8	81	Sulfate ppm	13.6
1.18mm	#16	60		
600µm	#30	43	Plasticity Index ASTM D 4318 - NP	
300µm	#50	23		
150µm	#100	6	% Finer than #200 ASTM C117	
75µm	#200	1.6		2.5
FM		2.89	% Clay Lumps ASTM C-142	0.2
Sand Equivalent ASTM D-2419		81		
Coefficient of Uniformity		6.08	Organic Impur. ASTM C-40	satisfactory
Durability Index ASTM D-3744		56	R Value	71
Unit Weight ASTM C-29				
Shale & Chert % ASTM C-295			Dry Loose (PCF)	106.2
			Dry Rodded (PCF)	110.0
Maximum Dry Density ASTM D1557				
ASTM PCF			131.3	Soundness NaSO4 ASTM C-88
Optimum Moisture %			10.2	Caltrans CT-214
			ASTM C-88	3.0
			ASTM C-88	3.3
ASTM C 1293 one year expansion			0.026% (Innocuous)	

# Manufacturer's Certification

We hereby certify that this Type II/V Low Alkali cement, sourced from US, CA, Mojave, supplied to you has been manufactured in accordance with and meets the standard requirements of ASTM C150 specification for Type II and Type V cement. Additionally, this Type II/V cement meets the requirements of Caltrans Standard Specification Sec. 90-1.02(B). Below are the average chemical and physical data from September 1, 2014 to September 29, 2014

**Report Date: 10/16/2014**

## ASTM C150 Requirements

Chemical Analysis	ASTM C150 Requirements		MOJAVE TYPE II/V	Additional Data
	TYPE II Requirements	TYPE V Requirements		
Silicon dioxide (SiO <sub>2</sub> ), min, %	---	---	<b>20.6</b>	Limestone Analysis <b>3.8</b>
Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> ), max, %	6	---	<b>3.5</b>	<b>1.1</b>
Ferric oxide (Fe <sub>2</sub> O <sub>3</sub> ), max, %	6	---	<b>3.6</b>	<b>0.6</b>
Calcium Oxide (CaO), %				<b>47.5</b>
Magnesium oxide (MgO), max, %	6	6	<b>3.1</b>	<b>1.5</b>
Sulfur trioxide (SO <sub>3</sub> ), max, %;	3	2.3	<b>2.8</b>	<b>0.1</b>
Loss on ignition, max, %	3.0	3.0	<b>2.6</b>	
Insoluble residue, max, %	0.75	0.75	<b>0.56</b>	Base Cement Phase Composition
Alkalies (Na <sub>2</sub> O+0.658*K <sub>2</sub> O), max, %	0.6	0.6	<b>0.56</b>	
Tricalcium silicate (C <sub>3</sub> S), %	---	---	<b>57</b>	<b>59</b>
Dicalcium silicate (C <sub>2</sub> S), %	---	---	<b>15</b>	<b>16</b>
Tricalcium aluminate (C <sub>3</sub> A), max, %;	8	5	<b>3</b>	<b>3</b>
Tetracalcium aluminoferrite (C <sub>4</sub> AF), %	---	---	<b>11</b>	<b>11</b>
C <sub>4</sub> AF + 2*(C <sub>3</sub> A), max, %;	---	25	<b>17</b>	
CO <sub>2</sub> , %	---	---	<b>1.3</b>	
limestone, max, %	5	5	<b>3.1</b>	
CaCO <sub>3</sub> in limestone, min, %	70	70	<b>92.8</b>	
<b>Physical Data</b>				
Air content of mortar, max, %	12	12	<b>7</b>	
Passing 45um (no. 325) sieve, %	---	---	<b>97.4</b>	
Blaine Fineness, min, m <sup>2</sup> /kg;	280/---	280/---	<b>408</b>	
Heat of Hydration, C186, (cal/g),	---	---	<b>77</b>	
Autoclave expansion, max, %	0.8	0.8	<b>0.01</b>	
Compressive Strength, min, MPa, (psi)				
3 days , Mpa	10	8	<b>25.5</b>	
PSI	1450	1160	<b>3700</b>	
7 days , Mpa	17	15	<b>31.5</b>	
PSI	2470	2180	<b>4570</b>	
28 days *(from previous month) Mpa	---	21	<b>39.0</b>	
PSI	---	3050	<b>5660</b>	
Vicat, initial set, min.-max., minutes	45-375	45-375	<b>159</b>	
C 1038, 14 day max, % expansion	0.02	0.02	<b>0.006</b>	
C 452, 14 day max, % expansion	---	0.04	<b>0.027</b>	
False Set, final penetration, min, %	50	50	<b>81</b>	

Apparatus and methods used in this laboratory have been checked by the Cement and Concrete Reference Laboratory of the National Institute of Standards and Technology. A copy of the report detailing their findings is available upon request. Major Oxides are analyzed by X-ray Fluorescence Spectrometry.

Note 1: ASTM C150, Table 1, Note D. It is permissible to exceed the values in the table for SO<sub>3</sub> content, provided it has been demonstrated by Test Method C1038 that the cement with the increased SO<sub>3</sub> will not develop expansion exceeding 0.020% at 14 days..

Note 2: ASTM C150, Table 1, Note B. Does not apply when the optional sulfate resistance limit in Table 4 is specified.

Note 3: ASTM C150, Table 1, Note H: For Informational Purposes Only

Note 4: Caltrans Specification Sec. 90-1.02B(2): Autoclave expansion shall not exceed 0.50 %.

Note 5: Caltrans Specification Sec. 90-1.02B(2): Type II cement C<sub>3</sub>S content shall not exceed 65%.

*Charles T. Wright Jr.*

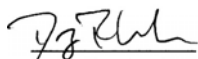
Charles T. Wright Jr. - Quality Control Superintende

**ASTM C618 Testing of  
Jim Bridger Fly Ash**

<b>Sample Type:</b> 3200-ton	<b>Report Date:</b> 12/3/2014
<b>Sample Date:</b> 10/10 - 10/13/14	<b>MTRF ID:</b> 2329JB
<b>Sample ID:</b> BR-116-14-R	

Chemical Analysis	ASTM Limits		ASTM Test Method
	Class F	Class C	
Silicon Dioxide (SiO <sub>2</sub> )	61.61 %		
Aluminum Oxide (Al <sub>2</sub> O <sub>3</sub> )	18.36 %		
Iron Oxide (Fe <sub>2</sub> O <sub>3</sub> )	4.73 %		
Sum of Constituents	84.70 %	70.0% min 50.0% min	D4326
Sulfur Trioxide (SO <sub>3</sub> )	0.58 %	5.0% max 5.0% max	D4326
Calcium Oxide (CaO)	5.66 %		D4326
Moisture	0.04 %	3.0% max 3.0% max	C311
Loss on Ignition	0.28 %	6.0% max 6.0% max	C311
<b>Physical Analysis</b>			
Fineness, % retained on #325	19.82 %	34% max 34% max	C311, C430
Strength Activity Index - 7 or 28 day requirement			C311, C109
7 day, % of control	94 %	75% min 75% min	
28 day, % of control	93 %	75% min 75% min	
Water Requirement, % control	98 %	105% max 105% max	
Autoclave Soundness	0.03 %	0.8% max 0.8% max	C311, C151
Density	2.39		C604

*Headwaters Resources certifies that pursuant to current ASTM C618 protocol for testing, the test data listed herein was generated by applicable ASTM methods and meets the requirements of ASTM C618.*

  
 Doug Rhodes, CET  
 Facility Manager



**Materials Testing & Research Facility**  
 2650 Old State Highway 113  
 Taylorsville, Georgia 30178  
 P: 770.684.0102  
 F: 770.684.5114

# MasterPozzolith® 322

## Water-Reducing Admixture

Formerly Pozzolith 322 N\*

### Description

MasterPozzolith 322 ready-to-use, liquid admixture is used for making more uniform and predictable quality concrete. It meets ASTM C 494/C 494M requirements for Type A, water-reducing, Type B, retarding, and Type D, retarding and water-reducing, admixtures.

### Applications

Recommended for use in:

- Prestressed concrete
- Precast concrete
- Reinforced concrete
- Shotcrete
- Lightweight concrete
- Pumped concrete
- 4x4™ Concrete
- Pervious concrete
- Self-consolidating concrete (SCC)

### Features

- Reduced water content required for a given workability
- Normal setting characteristics

### Benefits

- Improved workability
- Reduced segregation
- Superior finishing characteristics for flatwork and cast surfaces
- Increased compressive and flexural strengths

### Performance Characteristics

**Mix Data:** 400 lb/yd<sup>3</sup> (237 kg/m<sup>3</sup>) of Type I cement; slump 5 inches (125 mm); non-air-entrained concrete; concrete temperature 76 °F (24 °C); ambient temperature 74 °F (23 °C).

#### Setting Time

Mix Design	Initial Set (h:min)	Difference (h:min)
Plain Concrete	5:20	REF
MasterPozzolith 322 admixture @		
3 fl oz/cwt (195 mL/100 kg)	5:15	-0:05
5 fl oz/cwt (325 mL/100 kg)	5:40	+0:20
7 fl oz/cwt (460 mL/100 kg)	6:20	+1:00

#### Compressive Strength

Mix Design	psi	7 Days		psi	28 Days	
		MPa	%		MPa	%
Plain Concrete	2150	14.8	100	3070	21.2	100
MasterPozzolith 322 admixture @						
3 fl oz/cwt (195 mL/100 kg)	2820	19.4	131	3970	27.4	129
5 fl oz/cwt (325 mL/100 kg)	3160	21.8	147	4100	28.3	134
7 fl oz/cwt (460 mL/100 kg)	3190	22.0	148	4390	30.3	143

*Note: The data shown are based on controlled laboratory tests. Reasonable variations from the results shown here may be experienced as a result of differences in concrete-making materials and jobsite conditions.*

Setting time of concrete is influenced by the chemical and physical composition of the basic ingredients of the concrete, the temperature of the concrete and the climactic conditions. Trial mixes should be made with job site materials to determine the dosage required for specified setting time and a given strength requirement.

### Guidelines for Use

**Dosage:** MasterPozzolith 322 admixture is recommended for use within a range of 3-7 fl oz/cwt (195-460 mL/100 kg) of cement for most concrete mixtures using average concrete ingredients. Because of variations in job conditions and concrete materials, dosages other than the recommended amounts may be required. In such cases, contact your local sales representative.

### Product Notes

**Corrosivity – Non-Chloride, Non-Corrosive:** MasterPozzolith 322 admixture will neither initiate nor promote corrosion of reinforcing steel in concrete. This admixture does not contain intentionally-added calcium chloride or other chloride-based ingredients.

**Compatibility:** MasterPozzolith 322 admixture may be used in combination with any BASF admixtures. When used in conjunction with other admixtures, each admixture must be dispensed separately into the mixture.

### Storage and Handling

**Storage Temperature:** MasterPozzolith 322 admixture should be stored above freezing temperatures. If MasterPozzolith 322 admixture freezes, thaw at temperatures above 35 °F (2 °C) and completely reconstitute by mild mechanical agitation. **Do not use pressurized air for agitation.**

**Shelf Life:** MasterPozzolith 322 admixture has a minimum shelf life of 18 months. Depending on storage conditions, the shelf life may be greater than stated. Please contact your local sales representative regarding suitability for use and dosage recommendations if the shelf life of MasterPozzolith 322 admixture has been exceeded.

### Packaging

MasterPozzolith 322 admixture is supplied in 55 gal (208 L) drums, 275 gal (1040 L) totes and by bulk delivery.

### Related Documents

Safety Data Sheets: MasterPozzolith 322 admixture

## Additional Information

For additional information on MasterPozzolith 322 admixture, contact your local sales representative.

*The Admixture Systems business of BASF's Construction Chemicals division is the leading provider of solutions that improve placement, pumping, finishing, appearance and performance characteristics of specialty concrete used in the ready-mixed, precast, manufactured concrete products, underground construction and paving markets. For over 100 years we have offered reliable products and innovative technologies, and through the Master Builders Solutions brand, we are connected globally with experts from many fields to provide sustainable solutions for the construction industry.*

## Limited Warranty Notice

BASF warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. BASF MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of BASF. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. BASF WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on BASF's present knowledge and experience. However, BASF assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. BASF reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

\* Pozzolith 322 N became MasterPozzolith 322 under the Master Builders Solutions brand, effective January 1, 2014.

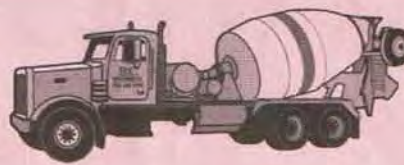
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**BASF Corporation**  
Admixture Systems  
[www.master-builders-solutions.basf.us](http://www.master-builders-solutions.basf.us)

**United States**  
23700 Chagrin Boulevard  
Cleveland, Ohio 44122-5544  
Tel: 800 628-9990 ■ Fax: 216 839-8821

**Canada**  
1800 Clark Boulevard  
Brampton, Ontario L6T 4M7  
Tel: 800 387-5862 ■ Fax: 905 792-0651





Phone No. 925.449.7785  
 Fax No. 925.449.1691  
 1227 Greenville Road  
 Livermore, CA 94550

CAUTION	TERMS & CONDITIONS
<p>May cause eye or skin irritation. Contains Portland cement. Freshly mixed cement, mortar, concrete, or grout may cause skin injury.</p> <ol style="list-style-type: none"> <li>Avoid all contact with eyes.</li> <li>Avoid prolonged Contact with skin. Wear rubber gloves and boots.</li> <li>FLUSH THOROUGHLY WITH CLEAN WATER if direct contact to skin or eyes.</li> <li>Seek medical attention if irritation persists.</li> <li>KEEP CHILDREN AWAY.</li> <li>WARNING: THIS PRODUCT CONTAINS ONE OR MORE CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.</li> </ol>	<p>By accepting delivery buyer agrees to the following terms:</p> <ol style="list-style-type: none"> <li>We make all deliveries inside street side curb only and accept no responsibility for damage made inside lot.</li> <li>A confined washout area must be provided and buyer assumes all responsibility and liability for cleaning the washout area.</li> <li>All orders COD are to be paid by Cash, Visa, or Master Card, unless otherwise authorized.</li> <li>There will be a \$35 charge on all returned checks. Charge account balances are to be paid within 30 days of the original delivery date; all past due balances will result in all loss of discount, and subject to finance charges equal to 1-1/2% per month (18% APR). SEE NOTES &amp; NOTICES BELOW</li> </ol>

**NOTICE TO PROPERTY OWNERS: Do Not rely upon this invoice as proof of payment. Property owners should be aware of all mechanic Lien laws. Customer further agrees to pay for expenses and costs including court & attorney's fees in connection with the collection of account.**

Arrive Job <i>10:40</i>	Start Pour	Finish Pour <i>11:10</i>	Total Min.	Chargeable Min. @\$1.50/Min. (M-F) @\$2.00/Min. (Sat.)	Arrive Plant		
COD (Yes/No) <i>Y</i>	Batch Time <i>9:37</i>	Acct. No. <i>COD</i>	Allowable Min. <i>45</i>	Driver <i>BRETT</i>	Truck No. <i>135</i>	Date <i>10/19/2015</i>	Ticket No. <i>174329</i>
Sold To: <b>MAGNUS</b> *C*O*D* CASH ON DELIVERY 916-471-8210				Delivery Address: <b>7544 DUBLIN BLVD DUB</b> <b>580 W.R&gt;SAN RAMON R&gt;DUBLIN R&gt;GOLDEN</b> <b>GATE L&gt;ST PATRICK</b>			

PO No.	Load No. <i>1</i>	Job Info <i>1030-1130</i>	Water Added @ Job gals.	By Whom:	Slump <i>5.00</i>		
Quantity This Load	Unit	Product Code	Description	Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered
<i>9.00</i>	<i>YD</i>	<i>CDFIF</i>	<i>CONTROL DENSITY FI</i>	<i>180.00</i>	<i>9.00</i>	<i>\$92.00</i>	<i>\$828.00</i>
<i>9.00</i>	<i>EA</i>	<i>SURCH1</i>	<i>ENVIROMENTAL FEE</i>	<i>130.00</i>	<i>9.00</i>	<i>\$5.00</i>	<i>\$45.00</i>

<b>WEIGHMASTER CERTIFICATE</b> THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.  BY: <i>[Signature]</i> Deputy Weighmaster Measured/Weighed at 1227 Greenville, Road, Livermore, CA 94550	ATTENTION: Signature below indicates that I have read all notices and disclaimers and agree to all terms. LOAD RECEIVED BY <i>[Signature]</i>	Sub Total	<i>\$873.00</i>
	<input checked="" type="checkbox"/> Property Damage Release Authorized	Taxes	<i>\$82.94</i>
		Total Ticket	<i>\$955.94</i>
		Other Chgs.	
		Grand Total	<i>\$955.94</i>

NOTES: 1. All traffic controls, flagmen, etc. are the responsibility and liability of the purchaser, and must conform to all applicable laws.  
 2. RC Readymix Co., Inc. makes NO guarantees or warranties with respect to product's finished appearance, color, uniformity, cracks or popouts.  
 3. Any additional water added to this concrete will alter the water to cement ratio, and therefore reduce the strength.  
 4. This concrete is designed in accordance with ACI standards; any additional water added is at purchaser's risk.  
 5. RC Readymix Co., Inc. provides 5 minutes free per yard. Excess time will be charged at the standby rate.

*"Our Service is Concrete"*



**CAUTION**

May cause eye or skin irritation. Contains Portland cement. Freshly mixed cement, mortar, concrete, or grout may cause skin injury.

1. Avoid all contact with eyes.
2. Avoid prolonged Contact with skin. Wear rubber gloves and boots.
3. FLUSH THOROUGHLY WITH CLEAN WATER if direct contact to skin or eyes.
4. Seek medical attention if irritation persists.
5. KEEP CHILDREN AWAY.
6. WARNING: THIS PRODUCT CONTAINS ONE OR MORE CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

**TERMS & CONDITIONS**

By accepting delivery buyer agrees to the following terms:  
 1. We make all deliveries inside street side curb only and accept no responsibility for damage made inside lot.  
 2. A confined washout area must be provided and buyer assumes all responsibility and liability for cleaning the washout area.  
 3. All orders COD are to be paid by Cash, Visa, or Master Card, unless otherwise authorized.  
 4. There will be a \$35 charge on all returned checks. Charge account balances are to be paid within 30 days of the original delivery date; all past due balances will result in all loss of discount, and subject to finance charges equal to 1-1/2% per month (18% APR). SEE NOTES & NOTICES BELOW

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Arrive Job <i>1120</i>	Start Pour <i>1130</i>	Finish Pour <i>1140</i>	Total Min. <i>20</i>	Chargeable Min. @\$1.50/Min. (M-F) @\$2.00/Min. (Sat.)	Arrive Plant		
COD (Yes/No)	Batch Time	Acct. No.	Allowable Min.	Driver	Truck No.	Date	Ticket No.
<i>Y</i>	<i>10:38</i>	<i>COD</i>	<i>45</i>	<i>ERIC</i>	<i>125</i>	<i>10/19/2015</i>	<i>174332</i>

Sold To: **MAGNUS**  
 \*C\*O\*D\* CASH ON DELIVERY  
 916-471-8210

Delivery Address: **7544 DUBLIN BLVD DUB**  
**580 W.R>SAN RAMON R>DUBLIN R>GOLDEN**  
**GATE L>ST.PATRICK**

PO No.	Load No.	2	Job Info	1030-1130	Water Added @ Job gals.	By Whom:	Slump	5.00
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Quantity This Load	Unit	Product Code	Description	Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered
9.00	YD	CDFIF	CONTROL DENSITY FI	130.00	18.00	\$92.00	\$828.00
9.00	EA	SURCH1	ENVIROMENTAL FEE	130.00	18.00	\$5.00	\$45.00

**WEIGHMASTER CERTIFICATE**

THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

BY: *Fred Brown*  
 Deputy Weighmaster  
 Measured/Weighed at 1227 Greenville, Road, Livermore, CA 94550

ATTENTION: Signature below indicates that I have read all notices and disclaimers and agree to all terms.  
 LOAD RECEIVED BY

X *[Signature]*

Property Damage Release Authorized  
 X

Sub Total	\$873.00
Taxes	\$82.94
Total Ticket	\$955.94
Other Chgs.	
<b>Grand Total</b>	<b>\$1,911.88</b>

- NOTES: 1. All traffic controls, flagmen, etc. are the responsibility and liability of the purchaser, and must conform to all applicable laws.  
 2. RC Readymix Co., Inc. makes NO guarantees or warranties with respect to product's finished appearance, color, uniformity, cracks or popouts.  
 3. Any additional water added to this concrete will alter the water to cement ratio, and therefore reduce the strength.  
 4. This concrete is designed in accordance with ACI standards; any additional water added is at purchaser's risk.  
 5. RC Readymix Co., Inc. provides 5 minutes free per yard. Excess time will be charged at the standby rate.

*"Our Service is Concrete"*



Phone No. 925.449.7785  
 Fax No. 925.449.1691  
 1227 Greenville Road  
 Livermore, CA 94550

CAUTION	TERMS & CONDITIONS
<p>May cause eye or skin irritation. Contains Portland cement. Freshly mixed cement, mortar, concrete, or grout may cause skin injury.</p> <ol style="list-style-type: none"> <li>Avoid all contact with eyes.</li> <li>Avoid prolonged Contact with skin. Wear rubber gloves and boots.</li> <li>FLUSH THOROUGHLY WITH CLEAN WATER if direct contact to skin or eyes.</li> <li>Seek medical attention if irritation persists.</li> <li>KEEP CHILDREN AWAY.</li> <li>WARNING: THIS PRODUCT CONTAINS ONE OR MORE CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.</li> </ol>	<p>By accepting delivery buyer agrees to the following terms:</p> <ol style="list-style-type: none"> <li>We make all deliveries inside street side curb only and accept no responsibility for damage made inside lot.</li> <li>A confined washout area must be provided and buyer assumes all responsibility and liability for cleaning the washout area.</li> <li>All orders COD are to be paid by Cash, Visa, or Master Card, unless otherwise authorized.</li> <li>There will be a \$35 charge on all returned checks. Charge account balances are to be paid within 30 days of the original delivery date; all past due balances will result in all loss of discount, and subject to finance charges equal to 1-1/2% per month (18% APR). SEE NOTES &amp; NOTICES BELOW</li> </ol>

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Arrive Job	Start Pour	Finish Pour	Total Min.	Chargeable Min. @\$1.50/Min. (M-F) @\$2.00/Min. (Sat.)	Arrive Plant		
1150	1200	1210					
COD (Yes/No)	Batch Time	Acct. No.	Allowable Min.	Driver	Truck No.	Date	Ticket No.
Y	11:09	COD	45	AL	126	10/19/2015	174335
Sold To: MAGNUS *C*O*D* CASH ON DELIVERY 916-471-8210				Delivery Address: 7544 DUBLIN BLVD DUB 580 W.R>SAN RAMON R>DUBLIN R>GOLDEN GATE L>ST.PATRICK			

PO No.	Load No.	3	Job Info	1030-1130	Water Added @ Job gals.	By Whom:	Slump	5.00
Quantity This Load	Unit	Product Code	Description	Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered	
9.00	YD	CDFF	CONTROL DENSITY FI	130.00	27.00	\$92.00	\$828.00	
9.00	EA	SURCH1	ENVIROMENTAL FEE	130.00	27.00	\$5.00	\$45.00	

<b>WEIGHMASTER CERTIFICATE</b> THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.  BY: <u>[Signature]</u> Deputy Weighmaster Measured/Weighed at 1227 Greenville, Road, Livermore, CA 94550	<b>ATTENTION: Signature below indicates that I have read all notices and disclaimers and agree to all terms.</b> <b>LOAD RECEIVED BY</b> X <u>[Signature]</u>	<b>Sub Total</b> \$873.00
	Property Damage Release Authorized X	<b>Taxes</b> \$82.94
		<b>Total Ticket</b> \$955.94
		<b>Other Chgs.</b> \$0.00
		<b>Grand Total</b> \$2,867.82

NOTES: 1. All traffic controls, flagmen, etc. are the responsibility and liability of the purchaser, and must conform to all applicable laws.  
 2. RC Readymix Co., Inc. makes NO guarantees or warranties with respect to product's finished appearance, color, uniformity, cracks or popouts.  
 3. Any additional water added to this concrete will alter the water to cement ratio, and therefore reduce the strength.  
 4. This concrete is designed in accordance with ACI standards; any additional water added is at purchaser's risk.  
 5. RC Readymix Co., Inc. provides 5 minutes free per yard. Excess time will be charged at the standby rate.

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Phone No. 925.449.7785  
 Fax No. 925.449.1691  
 1227 Greenville Road  
 Livermore, CA 94550

CAUTION	TERMS & CONDITIONS
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Arrive Job <b>1115</b>	Start Pour <b>1120</b>	Finish Pour <b>1130</b>	Total Min. <b>15</b>	Chargeable Min. @ \$1.50/Min. (M-F) @ \$2.00/Min. (Sat.)	Arrive Plant		
COD (Yes/No) <b>Y</b>	Batch Time <b>11:28</b>	Acct. No. <b>COD</b>	Allowable Min. <b>45</b>	Driver <b>TRENT</b>	Truck No. <b>136</b>	Date <b>10/19/2015</b>	Ticket No. <b>174337</b>
Sold To: <b>MAGNUS</b> <b>*C*O*D* CASH ON DELIVERY</b> <b>916-471-8210</b>				Delivery Address: <b>7544 DUBLIN BLVD DUB</b> <b>580 W.R&gt;SAN RAMON R&gt;DUBLIN R&gt;GOLDEN</b> <b>GATE L&gt;ST.PATRICK</b>			

PO No.		Load No.	<b>4</b>	Job Info	<b>1030-1130</b>	Water Added @ Job gals.	By Whom	Slump	<b>5.00</b>
Quantity This Load	Unir	Product Code	Description		Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered	
<b>9.00</b>	<b>YD</b>	<b>CDFIF</b>	<b>CONTROL DENSITY FI</b>		<b>130.00</b>	<b>36.00</b>	<b>\$92.00</b>	<b>\$828.00</b>	
<b>9.00</b>	<b>EA</b>	<b>SURCH1</b>	<b>ENVIROMENTAL FEE</b>		<b>130.00</b>	<b>36.00</b>	<b>\$5.00</b>	<b>\$45.00</b>	

<b>WEIGHMASTER CERTIFICATE</b> THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.  BY: <i>[Signature]</i> Deputy Weighmaster Measured/Weighed at 1227 Greenville, Road, Livermore, CA 94550	<b>ATTENTION: Signature below indicates that I have read all notices and disclaimers and agree to all terms.</b> <b>LOAD RECEIVED BY</b> <i>[Signature]</i>	Sub Total	<b>\$873.00</b>
	<input checked="" type="checkbox"/> Property Damage Release Authorized	Taxes	<b>\$82.94</b>
		Total Ticket	<b>\$955.94</b>
		Other Chgs.	
		<b>Grand Total</b>	<b>\$3,823.76</b>

NOTES: 1. All traffic controls, flagmen, etc. are the responsibility and liability of the purchaser, and must conform to all applicable laws.  
 2. RC Readymix Co., Inc. makes NO guarantees or warranties with respect to product's finished appearance, color, uniformity, cracks or popouts.  
 3. Any additional water added to this concrete will alter the water to cement ratio, and therefore reduce the strength.  
 4. This concrete is designed in accordance with ACI standards; any additional water added is at purchaser's risk.  
 5. RC Readymix Co., Inc. provides 5 minutes free per yard. Excess time will be charged at the standby rate.

*"Our Service is Concrete"*



Phone No. 925.449.7785  
 Fax No. 925.449.1691  
 1227 Greenville Road  
 Livermore, CA 94550

CAUTION	TERMS & CONDITIONS
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Arrive Job 12:15	Start Pour 12:40	Finish Pour 12:55	Total Min.	Chargeable Min. @\$1.50/Min. (M-F) @\$2.00/Min. (Sat.)	Arrive Plant		
COD (Yes/No) <input checked="" type="radio"/>	Batch Time 11:33	Acct. No. COD	Allowable Min. 45	Driver BRETT	Truck No. 135	Date 10/19/2015	Ticket No. 174338
Sold To: MAGNUS *C*O*D* CASH ON DELIVERY 916-471-8210				Delivery Address: 7544 DUBLIN BLVD DUB 580 W.R>SAN RAMON R>DUBLIN R>GOLDEN GATE L>ST.PATRICK			

PO No.	Load No. 5	Job Info 1030-1130	Water Added @ Job gals.	By Whom:	Slump 5.00		
Quantity This Load	Unit	Product Code	Description	Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered
9.00	YD	CDP1F	CONTROL DENSITY F1	130.00	45.00	\$92.00	\$828.00
9.00	EA	SURCH1	ENVIROMENTAL FEE	130.00	45.00	\$5.00	\$45.00

<b>WEIGHMASTER CERTIFICATE</b> THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.  BY: <i>[Signature]</i> Deputy Weighmaster Measured/Weighed at 1227 Greenville, Road, Livermore, CA 94550	<b>ATTENTION: Signature below indicates that I have read all notices and disclaimers and agree to all terms.</b> <b>LOAD RECEIVED BY</b> <input checked="" type="checkbox"/>	<b>Sub Total</b> \$873.00 <b>Taxes</b> \$82.94 <b>Total Ticket</b> \$955.94 <b>Other Chgs.</b>
	Property Damage Release Authorized <input checked="" type="checkbox"/>	<b>Grand Total</b> \$4,779.70

NOTES: 1. All traffic controls, flagmen, etc. are the responsibility and liability of the purchaser, and must conform to all applicable laws.  
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Phone No. 925.449.7785  
 Fax No. 925.449.1691  
 1227 Greenville Road  
 Livermore, CA 94550

CAUTION				TERMS & CONDITIONS			
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<b>NOTICE TO PROPERTY OWNERS: Do Not rely upon this invoice as proof of payment. Property owners should be aware of all mechanic Lien laws. Customer further agrees to pay for expenses and costs including court &amp; attorney's fees in connection with the collection of account.</b>							
Arrive Job 12:55	Start Pour 1:05	Finish Pour 1:15	Total Min. 20	Chargeable Min. @\$1.50/Min. (M-F) @\$2.00/Min. (Sat.)	Arrive Plant		
COD (Yes/No) Y	Batch Time 12:08	Acct. No. COD	Allowable Min. 45	Driver RAY	Truck No. 137	Date 10/19/2015	Ticket No. 174341
Sold To: MAGNUS *C*O*D* CASH ON DELIVERY 916-471-8210				Delivery Address: 7544 DUBLIN BLVD DUB 580 W.R>SAN RAMON R>DUBLIN R>GOLDEN GATE L>ST.PATRICK			
PO No.	Load No. 6	Job Info 1030-1130	Water Added @ Job gals.	By Whom:	Slump 5.00		
Quantity This Load	Unit	Product Code	Description	Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered
9.00	YD	CDFIF	CONTROL DENSITY FI	130.00	54.00	\$92.00	\$828.00
9.00	EA	SURCH1	ENVIROMENTAL FEE	130.00	54.00	\$5.00	\$45.00
<b>WEIGHMASTER CERTIFICATE</b> THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.				<b>ATTENTION: Signature below indicates that I have read all notices and disclaimers and agree to all terms.</b> <b>LOAD RECEIVED BY</b>		Sub Total	\$875.00
BY: <i>Fred Brown</i> Deputy Weighmaster Measured/Weighed at 1227 Greenville, Road, Livermore, CA 94550				<input checked="" type="checkbox"/>		Taxes	\$82.94
				<b>Property Damage Release Authorized</b>		Total Ticket	\$955.94
				<input checked="" type="checkbox"/>		Other Chgs.	
						Grand Total	\$5,735.64
NOTES: 1. All traffic controls, flagmen, etc. are the responsibility and liability of the purchaser, and must conform to all applicable laws. 2. RC Readymix Co., Inc. makes NO guarantees or warranties with respect to product's finished appearance, color, uniformity, cracks or popouts. 3. Any additional water added to this concrete will alter the water to cement ratio, and therefore reduce the strength. 4. This concrete is designed in accordance with ACI standards; any additional water added is at purchaser's risk. 5. RC Readymix Co., Inc. provides 5 minutes free per yard. Excess time will be charged at the standby rate.							

*"Our Service is Concrete"*



Phone No. 925.449.7785  
 Fax No. 925.449.1691  
 1227 Greenville Road  
 Livermore, CA 94550

CAUTION	TERMS & CONDITIONS
<p>May cause eye or skin irritation. Contains Portland cement. Freshly mixed cement, mortar, concrete, or grout may cause skin injury.</p> <ol style="list-style-type: none"> <li>Avoid all contact with eyes.</li> <li>Avoid prolonged Contact with skin. Wear rubber gloves and boots.</li> <li>FLUSH THOROUGHLY WITH CLEAN WATER if direct contact to skin or eyes.</li> <li>Seek medical attention if irritation persists.</li> <li>KEEP CHILDREN AWAY.</li> <li>WARNING: THIS PRODUCT CONTAINS ONE OR MORE CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.</li> </ol>	<p>By accepting delivery buyer agrees to the following terms:</p> <ol style="list-style-type: none"> <li>We make all deliveries inside street side curb only and accept no responsibility for damage made inside lot.</li> <li>A confined washout area must be provided and buyer assumes all responsibility and liability for cleaning the washout area.</li> <li>All orders COD are to be paid by Cash, Visa, or Master Card, unless otherwise authorized.</li> <li>There will be a \$35 charge on all returned checks. Charge account balances are to be paid within 30 days of the original delivery date; all past due balances will result in all loss of discount, and subject to finance charges equal to 1-1/2% per month (18% APR). SEE NOTES &amp; NOTICES BELOW</li> </ol>

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Arrive Job 135	Start Pour 135	Finish Pour 150	Total Min.	Chargeable Min. @\$1.50/Min. (M-F) @\$2.00/Min. (Sat.)	Arrive Plant		
COD (Yes/No) Y	Batch Time 12:58	Acct. No. COD	Allowable Min. 45	Driver AL	Truck No. 126	Date 10/19/2015	Ticket No. 174344
Sold To: MAGNUS *C*O*D* CASH ON DELIVERY 916-471-8210				Delivery Address: 7544 DUBLIN BLVD DUB 580 W.R>SAN RAMON R>DUBLIN R>GOLDEN GATE L>ST. PATRICK			

PO No.	Load No. 7	Job Info 1030-1130	Water Added @ Job gals.	By Whom:	Slump 5.00		
Quantity This Load	Unit	Product Code	Description	Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered
9.00	YD	CDFF	CONTROL DENSITY F1	130.00	63.00	\$92.00	\$828.00
9.00	EA	SURCH1	ENVIROMENTAL FEE	130.00	63.00	\$5.00	\$45.00

<b>WEIGHMASTER CERTIFICATE</b> THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.  BY: <u>[Signature]</u> Deputy Weighmaster Measured/Weighed at 1227 Greenville, Road, Livermore, CA 94550	<b>ATTENTION: Signature below indicates that I have read all notices and disclaimers and agree to all terms.</b> <b>LOAD RECEIVED BY</b> <u>[Signature]</u>	<b>Sub Total</b> \$873.00
	<input checked="" type="checkbox"/> Property Damage Release Authorized	<b>Taxes</b> \$82.94
		<b>Total Ticket</b> \$955.94
		<b>Other Chgs.</b> \$0.00
		<b>Grand Total</b> \$6,691.58

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 Fax No. 925.449.1691  
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Arrive Job <b>145</b>	Start Pour <b>150</b>	Finish Pour <b>200</b>	Total Min. <b>15</b>	Chargeable Min. @\$1.50/Min. (M-F) @\$2.00/Min. (Sat.)	Arrive Plant		
COD (Yes/No) <b>Y</b>	Batch Time <b>12:58</b>	Acct. No. <b>COD</b>	Allowable Min. <b>45</b>	Driver <b>TRENT</b>	Truck No. <b>136</b>	Date <b>10/19/2015</b>	Ticket No. <b>174345</b>
Sold To: <b>MAGNUS</b> <b>*C*O*D* CASH ON DELIVERY</b> <b>916-471-8210</b>				Delivery Address: <b>7544 DUBLIN BLVD DUB</b> <b>580 W.R&gt;SAN RAMON R&gt;DUBLIN R&gt;GOLDEN</b> <b>GATE L&gt;ST.PATRICK</b>			

PO No.	Load No. <b>8</b>	Job Info <b>1030-1130</b>	Water Added @ Job gals. <b>0</b>	By Whom: <b>189</b>	Slump <b>5.00</b>		
Quantity This Load	Unit	Product Code	Description	Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered
<b>9.00</b>	<b>YD</b>	<b>CDP1F</b>	<b>CONTROL DENSITY FI</b>	<b>130.00</b>	<b>72.00</b>	<b>\$92.00</b>	<b>\$828.00</b>
<b>9.00</b>	<b>EA</b>	<b>SURCH1</b>	<b>ENVIROMENTAL FEE</b>	<b>130.00</b>	<b>72.00</b>	<b>\$5.00</b>	<b>\$45.00</b>

<p><b>WEIGHMASTER CERTIFICATE</b>          THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.</p> <p>BY: <u><i>Food Brewer</i></u>          Deputy Weighmaster          Measured/Weighed at 1227 Greenville, Road, Livermore, CA 94550</p>	<p>ATTENTION: Signature below indicates that I have read all notices and disclaimers and agree to all terms.  <b>LOAD RECEIVED BY</b></p> <p><u><i>John [Signature]</i></u></p>	Sub Total	<b>\$873.00</b>
	Taxes	<b>\$82.94</b>	
	Total Ticket	<b>\$955.94</b>	
	Other Chgs.		
Property Damage Release Authorized <b>X</b>	Grand Total	<b>\$7,647.52</b>	

NOTES: 1. All traffic controls, flagmen, etc. are the responsibility and liability of the purchaser, and must conform to all applicable laws.  
 2. RC Readymix Co., Inc. makes NO guarantees or warranties with respect to product's finished appearance, color, uniformity, cracks or popouts.  
 3. Any additional water added to this concrete will alter the water to cement ratio, and therefore reduce the strength.  
 4. This concrete is designed in accordance with ACI standards; any additional water added is at purchaser's risk.  
 5. RC Readymix Co., Inc. provides 5 minutes free per yard. Excess time will be charged at the standby rate.

*"Our Service is Concrete"*



Phone No. 925.449.7785  
 Fax No. 925.449.1691  
 1227 Greenville Road  
 Livermore, CA 94550

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Arrive Job	Start Pour	Finish Pour	Total Min.	Chargeable Min. @\$1.50/Min. (M-F) @\$2.00/Min. (Sat.)	Arrive Plant		
2:10	2:15	2:25					
COD (Yes/No)	Batch Time	Acct. No.	Allowable Min.	Driver	Truck No.	Date	Ticket No.
Y	13:22	COD	45	BRETT	135	10/19/2015	174348

Sold To: **MAGNUS**  
 \*C\*O\*D\* CASH ON DELIVERY  
 916-471-8210

Delivery Address: **7544 DUBLIN BLVD DUB  
 580 W.R>SAN RAMON R>DUBLIN R>GOLDEN  
 GATE L>ST. PATRICK**

PO No.	Load No.	Job Info	Water Added @ Job gals.	By Whom:	Slump		
	9	1030-1130			5.00		
Quantity This Load	Unit	Product Code	Description	Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered
9.00	YD	CDP1F	CONTROL DENSITY FI	130.00	81.00	\$92.00	\$828.00
9.00	EA	SURCH1	ENVIROMENTAL FEE	130.00	81.00	\$5.00	\$45.00

<b>WEIGHMASTER CERTIFICATE</b> THIS IS TO CERTIFY that the following described commodity was weighed, measured or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.  BY: <u><i>Fred Vorum</i></u> Deputy Weighmaster Measured/Weighed at 1227 Greenville, Road, Livermore, CA 94550	<b>ATTENTION: Signature below indicates that I have read all notices and disclaimers and agree to all terms.</b> <b>LOAD RECEIVED BY</b> <u><i>[Signature]</i></u>	<b>Sub Total</b> \$875.00 <b>Taxes</b> \$82.94 <b>Total Ticket</b> \$955.94 <b>Other Chgs.</b>
	Property Damage Release Authorized <u><i>[Signature]</i></u>	<b>Grand Total</b> \$8,603.46

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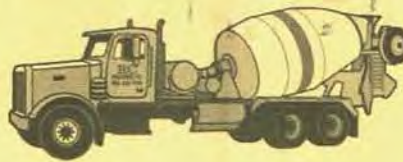
Arrive Job <b>2:35</b>	Start Pour <b>2:40</b>	Finish Pour <b>2:55</b>	Total Min. <b>20</b>	Chargeable Min. @ \$1.50/Min. (M-F) @ \$2.00/Min. (Sat.)	Arrive Plant		
COD (Yes/No) <b>Y</b>	Batch Time <b>13:56</b>	Acct. No. <b>COD</b>	Allowable Min. <b>45</b>	Driver <b>JORGE</b>	Truck No. <b>130</b>	Date <b>10/19/2015</b>	Ticket No. <b>174350</b>
Sold To: <b>MAGNUS</b> <b>*C*O*D* CASH ON DELIVERY</b> <b>916-471-8210</b>				Delivery Address: <b>7544 DUBLIN BLVD DUB</b> <b>580 W.R&gt;SAN RAMON R&gt;DUBLIN R&gt;GOLDEN</b> <b>GATE L&gt;ST.PATRICK</b>			

PO No.	Load No. <b>10</b>	Job Info <b>1030-1130</b>	Water Added @ Job gals.	By Whom:	Slump <b>5.00</b>		
Quantity This Load	Unit	Product Code	Description	Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered
<b>9.00</b>	<b>YD</b>	<b>CDFIF</b>	<b>CONTROL DENSITY FI</b>	<b>130.00</b>	<b>90.00</b>	<b>\$92.00</b>	<b>\$828.00</b>
<b>9.00</b>	<b>EA</b>	<b>SURCH1</b>	<b>ENVIROMENTAL FEE</b>	<b>130.00</b>	<b>90.00</b>	<b>\$5.00</b>	<b>\$45.00</b>

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	<b>Property Damage Release Authorized</b> <input checked="" type="checkbox"/>	<b>Taxes</b> <b>\$82.94</b>
	<b>Grand Total</b> <b>\$9,559.40</b>	
	<b>Other Chgs.</b> <b>\$955.94</b>	

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Arrive Job	Start Pour	Finish Pour	Total Min.	Chargeable Min. @\$1.50/Min. (M-F) @\$2.00/Min. (Sat.)	Arrive Plant		
200	300	330					
COD (Yes/No)	Batch Time	Acct. No.	Allowable Min.	Driver	Truck No.	Date	Ticket No.
Y	14:19	COD	45	AL	126	10/19/2015	174351
Sold To: MAGNUS *C*O*D* CASH ON DELIVERY 916-471-8210				Delivery Address: 7544 DUBLIN BLVD DUB 580 W.R>SAN RAMON R>DUBLIN R>GOLDEN GATE L>ST.PATRICK			

PO No.	Load No.	11	Job Info	1030-1130	Water Added @ Job gals.	By Whom:	Slump	5.00
Quantity This Load	Unit	Product Code	Description	Quantity Ordered	Quantity Delivered	Price Per Unit	Price Delivered	
9.00	YD	CDFF	CONTROL DENSITY F1	99.00	99.00	\$92.00	\$828.00	
9.00	EA	SURCH1	ENVIROMENTAL FEE	99.00	99.00	\$5.00	\$45.00	

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	<b>Property Damage Release Authorized</b> <input checked="" type="checkbox"/>	<b>Taxes</b> \$82.94
		<b>Total Ticket</b> \$955.94
		<b>Other Chgs.</b> \$0.00
		<b>Grand Total</b> 10,515.34

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**ATTACHMENT F**

Final Breakdown of Biopolymer Slurry Demonstration

10-20-2015

Well	Wtrtbl	Visc.	Time
1	15'	29.8	10:15 am
2	16'	29.8	1:11 pm
3	17.5'	30.0	11:50 am
4	18	29.4	12:01 pm
5	18	30.0	12: <del>12</del> pm
6	18.5	30.0	12:21 pm
"note"	request	By AMEC	Don (attor bot)
4		29.5	1:45 pm



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**ATTACHMENT G**

Central Concrete Supply Co Mix Design

# Dublin Apartments

Submittal Number: 31 66 20-0002-00  
Title: DDC's - Mix Design



7544 Dublin Boulevard  
Dublin CA 94568

Project ID:  
Owner: Dublin Apartment Properties, LLC  
Construction Team: ZCON Builders  
Design Team: BDE

Date Due: 10/20/2015  
Date Issued: 10/07/2015  
Substitution: No

## Information

Types: Design Mixtures  
Trades: Geotechnical Engineer, Structural Eng'r - Garage & Podium  
Categories: N/A  
Subcontractor/Manufacturer: Farrell Design-Build Co. Inc.

## Stamps

### ZCON Builders

This submittal has been reviewed for general compliance only as it relates to the CONTRACT DOCUMENTS. This review implies no approval of deviation from the plans and specifications, nor responsibility for errors or omissions in the submittal. The submittance shall remain responsible for all details required by the applicable requirements of the contract documents and applicable codes. This submittal shall not be used for the procurement, assembly, fabrication, or installation without the Architect's stamped approval.

Submittal No: 31 66 20-0002-00 Section No: [none]

Date: 10/07/2015 By: Sean McKinley



9/28/2015

Customer Name: FARRELL DESIGN BUILD CO INC

Project Name: DUBLIN PKS  
3025 VENTURE ROAD  
PLACERVILLE, CA 95667

Central Concrete Project #:

Central Concrete looks forward to the opportunity to partner with you on another successful project. Enclosed please find the following mix submittals and disclaimers:

Mix #	Usage	Design Strength (psi)
FOK100G5	SITE CONCRETE	1500

Enclosed are current proportions for the mix designs intended to be used for your project. Please see the list below including alternate materials that could be used. By approving these designs you acknowledge you are approving the use of these alternate materials.

**Cement**

Lehigh Permanente  
Cal Portland Mojave  
CEMEX Victorville  
Cal Portland Nanjing

**Pozzolan**

Salt River Materials Group  
Headwaters Resources  
Nevada Cement

**Slag**

Lehigh Nippon

**Low Shrink Coarse Aggregate**

Granite-Aromas  
Hanson-Orca  
Hanson-Clayton  
CEMEX-Clayton

**Gravel Coarse Aggregate**

Vulcan-Pleasanton  
CEMEX-Eliot  
Hanson-Sunol

**Fine Aggregate**

Vulcan-Pleasanton  
Hanson-Orca  
Hanson-SF Yard  
Hanson-Oakland Yard  
CEMEX-Eliot  
Hanson-Sunol  
Vulcan-Pilarcitos

**Lightweight Coarse Aggregates**

Glass Mountain Pumice  
Frazier Park

Respectfully,

ALEX GILBERTSON-DOBBS



9/28/2015

**FARRELL DESIGN BUILD CO INC**

**ProjectName: DUBLIN PKS**

**Customer/Project Number:**

**Project Address: 7544 DUBLIN BOULEVARD**

(Please use this number when calling Central to order)

Below are current proportions for the mix designs intended to be used for your project. Please see the cover letter to see the alternate materials that could be used. By approving these design(s) listed you acknowledge you are approving the use of these alternate materials.

### Mix # FOK100G5

**Mix Description: 5.5sk Snd Slrry**

**Slump: 8 ±**

**Usage: SITE CONCRETE**

**W/CM Ratio: 0.74**

**Design Strength: 1500 PSI**

**Plant: PLEASANTON (17)**

Material Code	Description	Source Supplier	Design Quantity (lbs/cy)	Volume
Fine Aggregate	ASTM C 33 Fine Agg	Hanson-Oakland	1361 lb	8.32
Fine Aggregate	ASTM C 33 Fine Agg	Vulcan -Pleasanton	1361 lb	8.26
Cement	ASTM C150	Calportland-Nanjing China	329 lb	1.67
Fly Ash	ASTM C 618 Class F	SRMG-Four Corners	188 lb	1.51
Water	ASTM C1602	Central Concrete-Central Concrete	46.0 gal	6.15
Admixture	C260: Master Air AE 90	BASF -Cleveland	-	-
Admixture	C494 Type A,F: Polyheed 9'	BASF -Cleveland	-	-
			<b>Air Target:</b>	4.00 %
			<b>Totals:</b>	3623 lb

**Optional to be added upon request**

Site Fresh	ASTM C 494 Type B & D	2 to 6
Site Set	ASTM C 494 Type C	10 to 45





**Concrete Mix Design Submittal**

Date : 09/28/2015      No.      44423      Version 1  
 Mix Code : F0K100G5      Description :      SITE CONCRETE

---

Sieve Size	Fine AUCSDA	Fine AUCBDA	Combined	Min	Max
2"	100.0	100.0	100.0		
1-1/2"	100.0	100.0	100.0		
1"	100.0	100.0	100.0		
3/4"	100.0	100.0	100.0		
1/2"	100.0	100.0	100.0		
3/8"	100.0	100.0	100.0		
No. 4	98.0	98.0	98.0		
No. 8	83.0	87.0	85.0		
No. 16	55.0	71.0	63.0		
No. 30	31.0	47.0	39.0		
No. 50	13.0	21.0	17.0		
No. 100	4.0	3.0	3.5		
No. 200	2.2	1.6	1.9		
<b>DRUW lb/ft3</b>					
<b>% Agg</b>	50.0	50.0			
<b>% Fine Agg</b>	50.0	50.0			
<b>SG</b>	2.62	2.64			
<b>FM</b>	2.73	3.16	2.98		

Prepared By :

June 2, 2015

Hanson Aggregates  
 West Region  
 12667 Alcosta Blvd. #400  
 San Ramon, CA 94583  
 Tel 925 244-6500

**OAKLAND CONCRETE SAND**

The Oakland Concrete Sand supplied by Hanson Aggregates is extracted from Point Knox Shoals San Francisco Bay and processed at its Oakland, CA facility. The typical physical properties of the aggregate are summarized below. SMARA #'s: 91-38-0003; 91-38-0002

Gradation:	Percent Passing		ASTM C 33 Spec.
	Oakland Concrete Sand	Caltrans Spec. Sec. 90	
Sieve Size			
9.50 mm (3/8")	100	100	100
4.75 mm (#4)	98	95 - 100	95 - 100
2.36 mm (#8)	87	65 - 95	80 - 100
1.18 mm (#16)	71 (66)	56 - 76 (X ± 10)	50 - 85
600 µm (#30)	47 (44)	35 - 53 (X ± 9)	25 - 60
300 µm (#50)	21 (20)	14 - 26 (X ± 6)	5 - 30
150 µm (#100)	3	2 - 12	0 - 10
75 µm (#200), C 117	1.6	0 - 8	
	(X-value)		
Fineness Modulus	2.73	-	2.3 - 3.1
Specific Gravity, Bulk S.S.D.	2.62	-	-
Absorption, %	0.5	-	-
Dry Rodded Unit Wt., pcf	97.0	-	-
Sand Equivalent, CTM 217	93	75 Min.	-
Organic Impurities, CTM 213	Clear	S	Clear
Rel. Mortar Strength, C 87, CTM 515	95%	95% Min.	-
Sod. Sulfate Sound, C 214	2.0%	10% Max.	10% Max.
Fine Durability, d <sub>f</sub> , CTM 229	80	60 Min.	
Deleterious Substances:			
Clay & Friables, C 142	1.0%	-	3.0% Max.
Lt. Wt. Particles, C 123	0.4%	-	0.5% Max.
Alkali Reactivity ASTM C 289	Innocuous	I	I

Should you have questions regarding this aggregate material, please do not hesitate to call your Sales Representative.

LEHIGH HANSON



Franco H. Siño  
 Quality Control Manager

These data have been developed on the basis of information and tests of materials submitted to this laboratory which are assumed to be representative of the materials to be used. All tests have been conducted in compliance with current ASTM or applicable methods of testing. ALL WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY, ORAL OR WRITTEN ARE EXCLUDED EXCEPT AS SET FORTH IN HANSON AGGREGATES' STANDARD TERMS AND CONDITIONS OF SALE. NO LIABILITY ARISING OUT OF THE USE OF THESE DATA WILL BE ASSUMED BY THIS CORPORATION.

# Vulcan Materials Company

Pleasanton Plant  
SMARA 91-01-0010

June, 2015

To:

Subject: 31822 - Top Sand Submittal

Project:

Please find below the laboratory test results. We certify that the fine aggregate produced at our Pleasanton operation meets the requirements of the American Society of Testing and Materials, ASTM C 33 and Caltrans Section 90. Our most recent test data presented for your review:

### 31822 - TOP SAND

GRADATION			
SIEVE SIZE	PERCENT PASSING	ASTM SPECIFICATION	CALTRANS SEC. 90
3/8" (9.5 mm)	100	100 - 100	100
No. 4 (4.75 mm)	99	95 - 100	95 - 100
No. 8 (2.36 mm)	85	80 - 100	65 - 95
No. 16 (1.18 mm)	58	50 - 85	(X=57±10) 47 - 67
No. 30 (600 µm)	33	25 - 60	(X=34±9) 25 - 43
No. 50 (300 µm)	13	5 - 30	(X=16±6) 10 - 22
No. 100 (150 µm)	3	0 - 10	2 - 12
No. 200 (75 µm)	1.6	0 - 5	0 - 8

### PHYSICAL PROPERTIES

ASTM STANDARD	FINE AGGREGATE ASTM C 33
Specific Gravity (SSD)	2.670
Sand Equivalent	80
Absorption	1.2%
Fineness Modulus	3.08
Fine Durability Index	70
ASTM C 88 - Sodium Sulfate Soundness (Fine)	1.3%
ASTM C 117 - Material Finer Than #200	1.60%
ASTM C123 - Light Weight Particles	0.3%
ASTM C142 - Clay Lumps & Friable Particles	0.0%
ASTM C40 Organic Impurities - Standard Color Procedure	(1) Lighter - Satisfactory

Respectfully,  
Vulcan Materials Company



Curtis Gilbert  
Technical Services

\*If no customer and/or job name is noted, this submittal expires 90 days from date above.



**Certificate of Analysis**  
**CalPortland - Stockton Terminal**

230 Port Road #3, Stockton, California, 95203 - Telephone: (209) 469-0109

We hereby certify that CalPortland Type II/V Low Alkali cement, sourced from Nanjing China, meets the standard requirements of ASTM C150 specification for Type II and Type V cement. Additionally, the Type II/V cement meets the requirements of Caltrans Standard Section 90-1.02(B). Below are the chemical and physical data pertaining to Lot# 15-222.

**ASTM C150 Type II/V Requirements**

Ship Name: Sinfonia

Report Date: 8/10/2015

	Type II Requirements	Type V Requirements	Analysis Results	Limestone Analysis
<b>Chemical Analysis</b>				
Silicon dioxide (SiO <sub>2</sub> ), %	—	—	20.0	1.6
Aluminum oxide (Al <sub>2</sub> O <sub>3</sub> ), max, %	6.0	—	3.6	0.8
Ferric oxide (Fe <sub>2</sub> O <sub>3</sub> ), max, %	6.0	—	3.7	0.2
Calcium Oxide (CaO), %	—	—	64.9	53.2
Magnesium oxide (MgO), max, %	6.0	6.0	0.9	0.3
Sulfur trioxide (SO <sub>3</sub> ), max, %	3.0 <sup>(1)</sup>	2.3 <sup>(1)</sup>	2.6	0.1
Loss on Ignition, max, %	3.0	3.0	2.5	
Insoluble residue, max, %	0.75	0.75	0.20	<b>Base</b>
Equivalent Alkalies, max, %	0.60	0.60	0.49	<b>Cement</b>
Tricalcium silicate (C <sub>3</sub> S), %	— <sup>(2)</sup>	—	68	70
Dicalcium Silicate (C <sub>2</sub> S), %	—	—	6	6
Tricalcium aluminate (C <sub>3</sub> A), max, %	8	5	3	3
Tetracalcium aluminoferrite (C <sub>4</sub> AF), %	—	—	11	12
C <sub>4</sub> AF + 2*(C <sub>3</sub> A), max, %	—	25	18	
CO <sub>2</sub> , %	—	—	1.6	
Limestone Addition, max, %	5.0	5.0	3.7	
CaCO <sub>3</sub> in Limestone, min, %	70	70	95	
<b>Physical Requirements</b>				
Air content of mortar, max, volume %	12	12	8.1	
Passing 45um (#325) sieve, %	—	—	97.8	
Blaine Fineness, min, m <sup>2</sup> /kg	260/—	260/—	372	
Autoclave expansion, max, %	0.8 <sup>(2)</sup>	0.8 <sup>(2)</sup>	-0.04	
<b>Compressive strength, min, Mpa [psi]</b>				
3 Day				
Mpa	10.0	8.0	27.0	
psi	1450	1160	3910	
7 Day				
Mpa	17.0	15.0	32.8	
psi	2470	2180	4750	
28 Day				8/26/2015
Mpa	—	21.0		
psi	—	3050		
Time of Setting : Vicat	45 - 375	45 - 375	155	
C1038 expansion, max, %	0.020	0.020		

Apparatus and methods used in this laboratory have been checked by the Cement and Concrete Reference Laboratory of the National Institute of Standards and Technology. A copy of the report detailing their findings is available upon request. Major Oxides are analyzed by X-ray Fluorescence Spectrometry.

Note 1: ASTM C150, Table 1, Note D, it is permissible to exceed the values in the table for SO<sub>3</sub> content, provided it has been demonstrated by

Test Method C1038 that the cement with the increased SO<sub>3</sub> will not develop expansion exceeding 0.020% at 14 days.

Note 2: Caltrans Specification Sec. 90-1.02B(2): Autoclave expansion shall not exceed 0.50 %.

Note 3: Caltrans Specification Sec. 90-1.02B(2): Type II cement C<sub>3</sub>S content shall not exceed 85%.

Gary Kirk  
 Cement Technical Sales Manager



100% AMERICAN™

Central Concrete Supply Co Inc  
 Attn: Kelly Idiart  
 830 W Elkhorn Blvd  
 Rio Linda, CA 95673-3006

Product: ASTM C618 Class F, Gallup Fly Ash  
 AASHTO M295

**6-21-15 POZZOLAN TEST REPORT** Cd#: 105407

**Lot: 770564 Results Specifications**

**Chemical Analysis** (C11 / C114 / D4326)

Silicon Dioxide, SiO <sub>2</sub>	61.61 %	---
Aluminum Oxide, Al <sub>2</sub> O <sub>3</sub>	24.15 %	---
Ferric Oxide, Fe <sub>2</sub> O <sub>3</sub>	4.25 %	---
SiO <sub>2</sub> + Al <sub>2</sub> O <sub>3</sub> + Fe <sub>2</sub> O <sub>3</sub>	90.01 %	70.00 Min
Calcium Oxide, CaO	2.30 %	---
Magnesium Oxide, MgO	1.14 %	---
Sulfur Trioxide, SO <sub>3</sub>	0.21 %	5.00 Max
Moisture Content	0.03 %	3.00 Max
Loss on Ignition	0.28 %	6.00 Max
Sodium Oxide, Na <sub>2</sub> O	1.12 %	---
Potassium Oxide, K <sub>2</sub> O	1.14 %	---
Total Alkalis (%Na <sub>2</sub> O + 0.658% K <sub>2</sub> O)	1.87 %	---
Available Alkalis as Na <sub>2</sub> O Equivalent	0.45 %	---

**Physical Analysis**

Fineness, amount retained on #325 sieve, % (C430)	23.00	34.00 Max
variation, points from average	0.12	5.00 Max
Density, g/cm <sup>3</sup> (C188)	1.99	---
Variation from average, %	0.03	5.00 Max
Strength Activity Index with Portland Cement (C311 / C109)		
at 7 days, % of cement control	75.60	---
at 28 days, % of cement control	89.84	75.00 Min
Water Requirement (C311)		
% of cement control	95.87	105.00 Max
Soundness, autoclave expansion (C311 / C151) or contraction, %	-0.02	0.80 Max

All tests have been made in strict accordance with the current standards of the American Society for Testing and Materials covering the type of material specified.

*Lee Gorby*  
 Lee Gorby, Quality Assurance Manager  
 03 AUG 2015



- Clarkdale Cement Plant**  
601 N. Cement Plant Rd  
Clarkdale, AZ 86324
- 19th Ave. Terminal**  
1802 W. Lower Buckeye Rd  
Phoenix, AZ 85007
- Lower Buckeye Terminal**  
1941 W. Lower Buckeye Rd  
Phoenix, AZ 85007
- 21st Ave. Terminal**  
1325 N. 21st Ave.  
Phoenix, AZ 85009
- 54th Ave. Terminal**  
5402 W Buchanan St.  
Phoenix, AZ 85043
- Dobson Storage**  
9595 E. McKellips Rd.  
Scottsdale, AZ 85250
- Cholla Fly Ash Plant**  
4801 Frontage Rd.  
Joseph City, AZ 86032
- Four Corners Fly Ash Plant**  
End of County Road 6675  
Fruitland, NM 87416
- San Juan Fly Ash Plant**  
End of County Road 6800  
Waterflow, NM 87421
- Escalante Fly Ash Plant**  
County Road 19  
Prewitt, NM 87405
- Gallup Transfer Terminal**  
900 N 9th St.  
Gallup, NM 87301
- San Diego Terminal**  
920 Bay Marina Dr.  
National City, CA 91950
- Fontana Budway Terminal**  
13600 Napa St.  
Fontana, Ca 92335
- Bakersfield Terminal**  
32535 7th Standard Rd.  
Bakersfield, CA 93314
- Stockton Terminal**  
1300 N. Gertrude Ave.  
Stockton, CA 95215
- Sacramento Terminal**  
4520 50th St.  
McClellan Park, CA 95652
- Panaca Pozzolan Plant**  
333 Hansen St.  
Panaca, NV 89042
- Big Lift Terminal**  
6996 W. Titan Rd.  
Littleton, CO 80125



A U.S. CONCRETE COMPANY

**Product: Mixing water used in the Production of Ready Mix Concrete**

**8/1/2015**

**Water Test Report**

**Density:** The water density for all Central Concrete production facilities are monitored with an automated device conforming to ASTM C 1603. Documentation of procedures and calibration are maintained at each production facility and can be made available upon request.

**Corporate Office**  
755 Stockton Avenue  
San Jose, CA 95126

**West Bay**  
San Jose  
790 Stockton Avenue  
889 Stockton Avenue  
457 Queens Lane

**South San Francisco**  
1305 San Mateo Avenue

**Redwood City**  
635 Seaport Avenue

**East Bay**  
Martinez  
893 Waterbird Way

**Pleasanton**  
1645 Stanley Boulevard

**Oakland**  
2400 Peralta Street  
401 Embarcadero Street

**Hayward**  
1844 W. Winton Avenue

**Brentwood**  
11911 Brentwood Boulevard

**Bode**  
San Francisco  
450 Amador Way

**TABLE 1 Performance Requirements for Mixing Water**

	Limits
Compressive strength, min % control at 7 days <sup>a</sup>	90
Time of setting, deviation from control, h: min <sup>a</sup>	From 1:00 earlier to 1:30 later

<sup>a</sup>Comparisons shall be based on fixed proportions for concrete or mortar mixtures. The control mixture shall be made with 100 % potable or distilled water. The test mixture shall be made with the mixing water that is being evaluated. (See Annex A1).

**Compressive Strength**

	Mix Design	Specific Gravity	Control	Gray
11-Aug-14	450PC5C1	1.09	100%	103%
29-Oct-14	6081	1.10	100%	119%
18-Nov-14	604CC	1.09	100%	101%
12-Dec-14	330PG9Q1	1.09	100%	105%
21-Jan-15	6012	1.07	100%	106%
17-Feb-15	3E5EC9D1	1.06	100%	105%
20-Mar-15	3E5EG9E1	1.03	100%	104%
22-Apr-15	356EG9C1	1.06	100%	99%
24-Jun-15	350PG9E1	1.08	100%	97%
17-Jul-15	4E5EC5C1	1.08	100%	97%

**Time of Setting**

	Mix Design	Control	Gray	Deviation from Control
11-Aug-14	450PC5C1	5.00	4.65	-0.21
29-Oct-14	6081	3.60	3.85	0.15
18-Nov-14	604CC	2.85	3.03	0.12
12-Dec-14	330PG9Q1	4.72	4.13	-0.35
21-Jan-15	6012	4.97	4.72	-0.15
17-Feb-15	3E5EC9D1	3.15	3.00	-0.25
20-Mar-15	3E5EG9E1	4.63	4.45	-0.11
22-Apr-15	356EG9C1	4.33	4.21	-0.07
24-Jun-15	350PG9E1	4.50	4.08	-0.25
17-Jul-15	4E5EC5C1	4.50	4.08	-0.25

**TABLE 2 Optional Chemical Limits for Combined Mixing Water<sup>a</sup>**

	Limits	Test Method
Maximum concentration in combined mixing water, ppm <sup>b</sup>		
A. Chloride as Cl <sup>-</sup> , ppm		
1. In prestressed concrete, bridge decks, or otherwise designated	500 <sup>c</sup>	C114 <sup>d</sup>
2. Other reinforced concrete in moist environments or containing aluminum embedments or dissimilar metals or with stay-in-place galvanized metal forms	1000 <sup>c</sup>	C114 <sup>d</sup>
B. Sulfate as SO <sub>4</sub> , ppm	3000	C114 <sup>d</sup>
C. Alkalies as (K <sub>2</sub> O + 0.658 K <sub>2</sub> O), ppm	600	C114 <sup>d</sup>
D. Total solids by mass, ppm	50,000	C1603



The Chemical Company

**November 25, 2014**

**Central Concrete Supply**

**Attention: Mike Donovan**

Certificate of Conformance

MasterAir® AE 90 Admixture (formerly MB-AE 90)

BASF Corporation Air-Entraining Admixture for Concrete"

I, Richard Hubbard, Sr. Technical Marketing Specialist for BASF Corporation, Cleveland, Ohio, certify:

That MasterAir AE 90 admixture is a BASF Corporation Air-Entraining Admixture for concrete; and

That MasterAir AE 90 and MB AE 90 admixture are the same product having identical composition, differing only in designation; and

That no calcium chloride or chloride based ingredient is used in the manufacture of MasterAir AE 90 admixture; and

That MasterAir AE 90 admixture, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.000068 percent (0.68 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That MasterAir AE 90 admixture meets the requirements of ASTM C260, the Standard Specification for Air-Entraining Admixtures for Concrete, as well as the requirements for air-entraining admixtures as specified in Corps of Engineers' CRD-C 13 and AASHTO M154.

A handwritten signature in black ink that reads "Richard Hubbard III".

Richard Hubbard  
Sr. Technical Marketing Specialist



The Chemical Company

**November 25, 2014**

**Central Concrete Supply**

**Attention: Mike Donovan**

Certificate of Conformance

MasterPolyheed® 997 Admixture (formerly PolyHeed 997)

BASF Corporation Admixture for Concrete

I, Richard Hubbard, Sr. Technical Marketing Specialist for BASF Corporation, Cleveland, Ohio, certify:

That MasterPolyheed 997 admixture is a BASF Corporation Mid-Range Water-Reducing Admixture for concrete; and

That MasterPolyheed 997 and PolyHeed 997 admixture are the same product having identical composition, differing only in designation; and

That no calcium chloride or chloride based ingredient is used in the manufacture of MasterPolyheed 997 admixture; and

That MasterPolyheed 997 admixture, based on the chlorides originating from all the ingredients used in its manufacture, contributes less than 0.00012 percent (1.2 ppm) chloride ions by weight of the cement when used at the rate of 65 mL per 100 kg (1 fluid ounce per 100 pounds) of cement; and

That MasterPolyheed 997 admixture meets the requirements for a Type A, Water-Reducing Admixture, and Type F, Water-Reducing, High Range Admixture specified in ASTM C494/C494M, the Standard Specification for Chemical Admixtures for Concrete, as well as the requirements of Type A and Type F admixtures as specified in Corps of Engineers' CRD-C 87 and AASHTO M194.

A handwritten signature in black ink that reads "Richard Hubbard III".

Richard Hubbard  
Sr. Technical Marketing Specialist

BASF Corporation  
Admixtures Systems  
23700 Chagrin Boulevard  
Cleveland, Ohio 44122  
Telephone (216) 839-7500

**MASTER®**  
**» BUILDERS**  
SOLUTIONS





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**ATTACHMENT H**

Potrero Hills Landfill Special Waste Profile, Disposal Log, & Manifests

**Potrero Hills Landfill**  
 3675 Potrero Hills Lane  
 Suisun, CA 94585  
 Phone: 707.432.4622  
 Fax: 707.426.5013



FOR OFFICE USE ONLY
APPROVAL NUMBER:
EXPIRATION DATE:
APPROVED BY:

**SPECIAL WASTE PROFILE**

Information utilized for completion of this form must originate from an authorized representative of the generator of the waste material. The information on this form must be COMPLETELY FILLED OUT, TYPE WRITTEN, and the form must be SIGNED BY AUTHORIZED REPRESENTATIVE.

<b>A. GENERATOR INFORMATION</b>		<b>B. CUSTOMER/BILLING INFORMATION</b>	
1. Generator Name: DUBLIN APARTMENT PROPERTIES LLC#		1. Billing Name: Bradley Tanks, Inc	
2. Address: 2 Henry Adams Street, Suite 450		2. Address: 402 Hartz Avenue, Building C	
City: San Francisco	County:	City: Danville	County: Contra Costa
State: CA	Zip: 94103	State: CA	Zip: 94526
3. Site Location (if different): 7544 Dublin Blvd, Dublin, CA		3. Contact Name: Kelly Graser	
4. Contact Name: Adam Lambert		4. Phone Number: 510-207-9927	5. Fax Number: 510-803-5084
5. Phone Number: 415-509-1441	6. Fax Number: - -	6. Email Address: kgraser@btienvironmental.com	
7. Email Address: adam@baywestdevelopment.com		7. Is there a service agreement on file? <input type="checkbox"/> YES <input type="checkbox"/> NO	
8. State Facility ID # (if applicable): N/A		8. Agent / Consultant:	
9. State Waste Code (if applicable): N/A		9. Letter of Authorization: <input type="checkbox"/> YES <input type="checkbox"/> NO	
<b>C. TRANSPORTER/SHIPPING INFORMATION</b>		<b>D. WASTE STREAM INFORMATION</b>	
1. Name: Bradley Tanks, Inc		1. Common Name of Material or Waste Stream: Non-hazardous Soil	
2. Street Address: 402 Hartz Avenue, Building C		2. Detailed Description of Process or How Generated (Attach additional sheet if needed): Soil Excavated to install underground PRB wall to treat/keep groundwater contaminated w/ fuel and VOCs from entering residential site	
City: Danville	State: CA		
3. Phone Number: 510-207-9927	4. Fax Number: 510-803-5084	3. Physical State at 70°F: <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Semi-Solid <input type="checkbox"/> Sludge <input type="checkbox"/> Liquid <input type="checkbox"/> Powder <input type="checkbox"/> Other _____	
5. Contact Name: Jessica Carr		4. Free Liquids: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES % Liquids	
6. EPA or State Transporter ID #: CAR000224568		5. Color: Brown	
7. Designated Landfill(s): Potrero Hills LF		6. pH Range: N/A	
8. Packaging: <input checked="" type="checkbox"/> Bulk Solids <input type="checkbox"/> Bulk Liquids <input type="checkbox"/> Drums <input type="checkbox"/> Roll-Off <input type="checkbox"/> Dump Truck <input type="checkbox"/> Tank Truck <input type="checkbox"/> Vacuum Box <input type="checkbox"/> Bagged		7. Odor: <input checked="" type="checkbox"/> None <input type="checkbox"/> Mild <input type="checkbox"/> Significant Describe:	
9. Estimated Volume: 600 <input checked="" type="checkbox"/> Tons <input type="checkbox"/> Cubic Yards <input type="checkbox"/> Drums <input type="checkbox"/> Gallons <input type="checkbox"/> Other: _____		8. Flash Point: N/A <input type="checkbox"/> °F <input type="checkbox"/> °C	
10. Shipping Frequency: _____ per <input checked="" type="checkbox"/> One Time Project <input type="checkbox"/> Month <input type="checkbox"/> Quarter <input type="checkbox"/> Year <input type="checkbox"/> Other: _____		9. Reactive: <input checked="" type="checkbox"/> NO <input type="checkbox"/> YES with	
		10. State Required Information (if applicable): N/A	

<b>E. NON-HAZARDOUS DETERMINATION</b>	
1. Attached Document(s) (check all that apply): <input type="checkbox"/> Not Applicable <input type="checkbox"/> MSDS <input checked="" type="checkbox"/> Certified Analytical Report <input type="checkbox"/> Process Knowledge	
2. If Process Knowledge, provide details: Gasoline, diesel and VOCs are from off-site source - source of VOCs is unknown	
3. If analytical data is attached, is the data derived from testing a representative sample in accordance with 40 CFR 261 and/or other applicable laws? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Type of Sample: <input checked="" type="checkbox"/> Composite <input type="checkbox"/> Grab	

<b>F. CERTIFICATION INFORMATION</b>	
1. <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification, list prior approval number(s): <input type="checkbox"/> Amendment, Details:	
2. Have there been any changes to the composition of, or process generating this waste stream that would alter the characteristics of the waste stream? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (Updated analysis may be required.)	

**G. WASTE CERTIFICATION STATEMENT:**  
 I hereby certify that all information contained herein is true and correct, and the material described is properly identified, classified, packaged, labeled, and prepared as indicated. I certify this waste is not hazardous or dangerous as defined by the U.S. EPA, or the state or province of origin. I certify this waste does not contain any regulated radioactive materials, that all known and suspected hazards have been disclosed, and that the waste is not a regulated hazardous waste by government or local authority, and does not contain PCB's regulated by TSCA or any other regulatory authority. I certify that all samples used for this analysis are representative of the materials described herein. I understand that all wastes may undergo inspection upon arrival at the designated facility and may be refused if the delivered material does not conform to the description herein. Notification will be provided immediately if there is a change in the composition of, or process generating this waste stream, prior to offering the waste for shipment or management.

Adam Lambert owner rep  
 AUTHORIZED REPRESENTATIVE NAME/TITLE  
  
 AUTHORIZED REPRESENTATIVE SIGNATURE

Bay West Development  
 COMPANY NAME  
 10-21-15  
 DATE COMPLETED



**Magnus Pacific**  
**Dublin Apartments Project**  
**Non-Hazardous Soil to Potrero Hills Landfill**

**Total Tons 742.56**

**Total Loads 31**

<b>Date</b>	<b>Approval</b>	<b>Ticket</b>	<b>Tons</b>
10/26/2015	PHLF15663	612731	19.42
10/26/2015	PHLF15663	612758	25.46
10/26/2015	PHLF15663	612764	25.02
10/26/2015	PHLF15663	612765	25.12
10/26/2015	PHLF15663	612773	23.58
10/26/2015	PHLF15663	612778	23.88
10/26/2015	PHLF15663	612852	24.52
10/26/2015	PHLF15663	612861	23.78
10/26/2015	PHLF15663	612873	23.05
10/26/2015	PHLF15663	612889	25.93
10/26/2015	PHLF15663	612890	23.07
10/26/2015	PHLF15663	612894	23.15
10/27/2015	PHLF15663	613059	22.58
10/27/2015	PHLF15663	613070	22.94
10/27/2015	PHLF15663	613075	24.18
10/27/2015	PHLF15663	613100	22.72
10/27/2015	PHLF15663	613105	26.91
10/27/2015	PHLF15663	613109	23.73
10/27/2015	PHLF15663	613112	25.57
10/27/2015	PHLF15663	613120	24.11
10/27/2015	PHLF15663	613182	23.27
10/27/2015	PHLF15663	613190	23.76
10/27/2015	PHLF15663	613207	23.50
10/27/2015	PHLF15663	613217	22.77
10/27/2015	PHLF15663	613219	24.28
10/27/2015	PHLF15663	613226	22.91
10/27/2015	PHLF15663	613267	24.25
10/27/2015	PHLF15663	613283	27.90
10/28/2015	PHLF15663	613428	23.06
10/28/2015	PHLF15663	613449	25.57
10/28/2015	PHLF15663	613526	22.57

7<sup>th</sup> Morning

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 888-375-3330	4. Waste Tracking Number B11 2827
5. Generator's Name and Mailing Address: Urban Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1441			Generator's Site Address (if different than mailing address) 7544 Dublin Blvd Dublin, CA		
Generator's Phone:			U.S. EPA ID Number		
6. Transporter 1 Company Name Orkeley Tanks, Inc			G18002A4568		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Potrero Hills Landfill 3675 Potrero Hills Lane Suisun, CA 94585 707-432-4627			U.S. EPA ID Number N/A		
Facility's Phone:			U.S. EPA ID Number		
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. Non-Hazardous Soil		1	DT	18	CY
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information Approval # PHLF-15-663 Account # for ER phone # is BR31029					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offor's Printed/Typed Name Dana Salt			Signature 		Month Day Year 10 21 15
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name Steve Kyle			Signature 		Month Day Year 10 26 15
Transporter 2 Printed/Typed Name			Signature		Month Day Year
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number: _____					
17b. Alternate Facility (or Generator)			U.S. EPA ID Number		
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)			Signature		Month Day Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name			Signature		Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 650-373-3110	4. Waste Tracking Number E17 2837
5. Generator's Name and Mailing Address in Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1441			Generator's Site Address (if different than mailing address) Dublin, CA		
Generator's Phone:			U.S. EPA ID Number		
6. Transporter 1 Company Name <i>Samba fe Trucking</i>			CA2500168777		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Potrero Hills Landfill 3675 Potrero Hills Lane Suisun, CA 94585 707-432-4627			U.S. EPA ID Number N/A		
Facility's Phone:					
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. Non-Hazardous Soil		1	DT	18	CY
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information Approval # PHLF-15-663 ACCURATE # for ER phone # is BR31029					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offeror's Printed/Typed Name <i>Adrian Lambert</i>			Signature <i>[Signature]</i>	Month 10	Day 15
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name <i>Santiago Ruiz</i>			Signature <i>[Signature]</i>	Month 10	Day 26
Transporter 2 Printed/Typed Name			Signature	Month	Day
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number: _____					
17b. Alternate Facility (or Generator)			U.S. EPA ID Number		
Facility's Phone: _____					
17c. Signature of Alternate Facility (or Generator)			Month	Day	Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name			Signature	Month	Day

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: N/A  
 2. Page 1 of 1  
 3. Emergency Response Phone: 888-375-3330  
 4. Waste Tracking Number: 517 2831

5. Generator's Name and Mailing Address: Dublin Apartment Properties LLC  
 2 Henry Adams Street, Suite 450  
 San Francisco, CA 94103 415-509-1441  
 Generator's Site Address (if different than mailing address): Dublin, CA

Generator's Phone: \_\_\_\_\_

6. Transporter 1 Company Name: **SS BAINS** U.S. EPA ID Number: \_\_\_\_\_  
 7. Transporter 2 Company Name: \_\_\_\_\_ U.S. EPA ID Number: \_\_\_\_\_

8. Designated Facility Name and Site Address: **Potrero Hills Landfill**  
 3875 Potrero Hills Lane  
 Susan, CA 94585 707-432-4627 U.S. EPA ID Number: **N/A**  
 Facility's Phone: \_\_\_\_\_

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. Non-Hazardous Soil	1	DT	18	CY
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information  
 Approval # **PHLR-15-663**  
 Account # (or RR phone # is **BR31029**  
**#33**  
**WP5639**  
**NR 4115**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offor's Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: **10** Day: **26** Year: **15**

15. International Shipments  Import to U.S.  Export from U.S. Port of entry/exit: \_\_\_\_\_ Date leaving U.S.: \_\_\_\_\_

16. Transporter Acknowledgment of Receipt of Materials  
 Transporter 1 Printed/Typed Name: **SARBjit S BAINS** Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_  
 Transporter 2 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

17. Discrepancy  
 17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

Manifest Reference Number: \_\_\_\_\_

17b. Alternate Facility (or Generator) U.S. EPA ID Number: \_\_\_\_\_

Facility's Phone: \_\_\_\_\_

17c. Signature of Alternate Facility (or Generator) Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a  
 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

GENERATOR  
INT'L  
TRANSPORTER  
DESIGNATED FACILITY

GENERATOR

TRANSPORTER

DESIGNATED FACILITY

<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 888-375-3330	4. Waste Tracking Number E11 2830
5. Generator's Name and Mailing Address: Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103-415-509-1441			Generator's Site Address (if different than mailing address) Dublin, CA		
Generator's Phone:					
6. Transporter 1 Company Name T.E.C. PUNO TRANSPORT			U.S. EPA ID Number		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Potrero Hills Landfill 3675 Potrero Hills Lane Susan, CA 94585 707-432-4627			U.S. EPA ID Number N/A		
Facility's Phone:					
9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
	No.	Type			
1. Non-Hazardous Soil	1	DT	18	CY	
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information Approval # PHLF-15-663 ACCOUNT # for ER phone # is ER31029 9F28302 #2223					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generators/Offeror's Printed/Typed Name John Lee Scott			Signature <i>[Signature]</i>		Month Day Year 10 46 17
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name PABBY E PUNO			Signature <i>[Signature]</i>		Month Day Year
Transporter 2 Printed/Typed Name			Signature		Month Day Year
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number: _____					
17b. Alternate Facility (or Generator)			U.S. EPA ID Number		
Facility's Phone: _____					
17c. Signature of Alternate Facility (or Generator)			Month Day Year		
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name			Signature		Month Day Year

<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 888-373-3130	4. Waste Tracking Number E11 2829		
5. Generator's Name and Mailing Address Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1041		Generator's Site Address (if different than mailing address) 1344 Dublin Blvd Dublin, CA				
Generator's Phone:		6. Transporter 1 Company Name B.T. 402 Hearts Danville		U.S. EPA ID Number		
7. Transporter 2 Company Name				U.S. EPA ID Number		
8. Designated Facility Name and Site Address Potrero Hills Landfill 3675 Potrero Hills Lane Suisun, CA 94585 707-432-4627				U.S. EPA ID Number N/A		
Facility's Phone:						
9. Waste Shipping Name and Description		10. Containers		11. Total	12. Unit	
		No.	Type	Quantity	Wt./Vol.	
1. Non-Hazardous Soil		1	BT	18	CY	
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information Approval # PHLF-15-663 ACCOUNT # for ER phone # is BR31029 MOT						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offeor's Printed/Typed Name Alan Lopez		Signature 		Month 10	Day 26	Year 15
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name MANUEL AR to me		Signature 		Month 10	Day 26	Year 15
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
17b. Alternate Facility (or Generator)				U.S. EPA ID Number		
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)				Month	Day	Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name		Signature		Month	Day	Year

GENERATOR  
 INT'L  
 TRANSPORTER  
 DESIGNATED FACILITY



**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number  
N/A

2. Page 1 of  
1

3. Emergency Response Phone  
888-375-5336

4. Waste Tracking Number  
BTI 2828

5. Generator's Name and Mailing Address  
Dublin Apartment Properties LLC  
2 Henry Adams Street, Suite 450  
San Francisco, CA 94103 415-509-1441

Generator's Site Address (if different than mailing address)  
754 Dublin Blvd  
Dublin, CA

Generator's Phone:

6. Transporter 1 Company Name  
S S BAINS

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address  
Potrero Hills Landfill  
3675 Potrero Hills Lane  
Suisun, CA 94585 707-432-4627

U.S. EPA ID Number

Facility's Phone:

N/A

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

No.

Type

1. Non-Hazardous Soil

1

BT

18

CY

2.

3.

4.

13. Special Handling Instructions and Additional Information

Approval # PHLF-15-663  
Account # for ER phone # 1s BR31029

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Signature

Month Day Year

10 26 15

15. International Shipments  Import to U.S.  Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

HARDEEP SINGH

10 26 15

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

2nd Afternoon

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A  
2. Page 1 of 1  
3. Emergency Response Phone: 888-375-3336  
4. Waste Tracking Number: BT1 2834

5. Generator's Name and Mailing Address: Dublin Apartment Properties LLC, 2 Henry Adams Street, Suite 450, San Francisco, CA 94103 415-509-1441  
Generator's Site Address (if different than mailing address): 754 Dublin Blvd, Dublin, CA

6. Transporter 1 Company Name: B.T.I. 402 Harts Donville  
U.S. EPA ID Number:

7. Transporter 2 Company Name:  
U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Potrero Hills Landfill, 3675 Potrero Hills Lane, Suisun, CA 94585 707-432-4527  
U.S. EPA ID Number: N/A

9. Waste Shipping Name and Description: Non-Hazardous Soil  
10. Containers: No. 1, Type DT  
11. Total Quantity: 18  
12. Unit Wt./Vol.: CY

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. Non-Hazardous Soil	1	DT	18	CY
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information: Approval # PHLP-15-653, Account # for ER phone # is BR31029, MOT

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name: [Signature] Signature: [Signature] Month: 10, Day: 26, Year: 15

15. International Shipments:  Import to U.S.,  Export from U.S. Port of entry/exit: Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MANOHAR SURESH Signature: [Signature] Month: 10, Day: 26, Year: 15

Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

17. Discrepancy 17a. Discrepancy Indication Space:  Quantity,  Type,  Residue,  Partial Rejection,  Full Rejection

17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number:

Facility's Phone: 17c. Signature of Alternate Facility (or Generator) Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a Printed/Typed Name: Signature: Month: Day: Year:

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number  
N/A

2. Page 1 of 1

3. Emergency Response Phone  
888-375-5338

4. Waste Tracking Number  
EIT 2838

5. Generator's Name and Mailing Address

Dublin Apartment Properties LLC  
2 Henry Adams Street, Suite 450  
San Francisco, CA 94103 415-509-1441

Generator's Site Address (if different than mailing address)

1244 Dublin Blvd  
Dublin, CA

Generator's Phone:

6. Transporter 1 Company Name

**Bradley Tanks, Inc**

U.S. EPA ID Number

CAK000224568

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Potrero Hills Landfill  
3675 Potrero Hills Lane  
Suisun, CA 94585 707-432-4627

U.S. EPA ID Number

N/A

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total Quantity

12. Unit Wt./Vol.

1. Non-Hazardous Soil

1

DT

18

CY

13. Special Handling Instructions and Additional Information

Approval # DRLF-15-663  
Account # for ER phone # is BR31028

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Signature

Month Day Year

Alan Lambert

*[Signature]*

10 26 15

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

Steve Kyles

*[Signature]*

Month Day Year

10 26 15

Transporter 2 Printed/Typed Name

Signature

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone  
888-379-3130

4. Waste Tracking Number  
817 2237

5. Generator's Name and Mailing Address

Corbin Apartment Properties LLC  
2 Harry Adams Street, Suite 450  
San Francisco, CA 94103 415-509-1001

Generator's Site Address (if different than mailing address)

734 Columbus Blvd  
Dublin, CA

Generator's Phone:

6. Transporter 1 Company Name

*Santa Fe Trucking*

U.S. EPA ID Number

*CA2000168799*

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Potrero Hills Landfill  
3675 Potrero Hills Lane  
Suisun, CA 94585 707-432-4627

U.S. EPA ID Number

N/A

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total Quantity

12. Unit Wt./Vol.

1.

Non-Hazardous Soil

1

OT

18

CY

2.

3.

4.

13. Special Handling Instructions and Additional Information

Approval # PHLR-15-063  
Account # for ER phone # is BR31029

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Signature

Month Day Year

*Alan Larsen*

*[Signature]*

11 2 11

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

*Santiago Ruiz*

*[Signature]*

10 26 15

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

U.S. EPA ID Number

17b. Alternate Facility (or Generator)

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number  
N/A

2. Page 1 of 1

3. Emergency Response Phone  
888-375-5336

4. Waste Tracking Number  
ETI 2836

5. Generator's Name and Mailing Address

Dublin Apartment Properties LLC  
2 Henry Adams Street, Suite 450  
San Francisco, CA 94103 415-509-1441

Generator's Site Address (if different than mailing address)

1545 Dublin Blvd  
Dublin, CA

Generator's Phone:

6. Transporter 1 Company Name

TEE PUNO TRANSPORT

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Potrero Hills Landfill  
3675 Potrero Hills Lane  
Suisun, CA 94585 707-432-4627

U.S. EPA ID Number

Facility's Phone:

N/A

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

No.

Type

1.

Non-Hazardous Soil

1

DT

18

CY

2.

3.

4.

13. Special Handling Instructions and Additional Information

Approval # PHLP-15-663  
Account # for ER phone # is ER31029

#12223

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Signature

Month Day Year

10 26 15

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

10 26 15

Transporter 2 Printed/Typed Name

Signature

Month Day Year

10 26 15

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

U.S. EPA ID Number

17b. Alternate Facility (or Generator)

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a.

Printed/Typed Name

Signature

Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number: **3835**

5. Generator's Name and Mailing Address: **Lin Apartment Properties LLC  
2 Henry Adams Street, Suite 450  
San Francisco, CA 94103 415-509-1101**

Generator's Site Address (if different than mailing address): **Dublin, CA**

Generator's Phone:

6. Transporter 1 Company Name: **S&BAIN'S**

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address: **Potrero Hills Landfill  
3675 Potrero Hills Lane  
Suisun, CA 94585 707-432-4627**

U.S. EPA ID Number

**N/A**

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

11. Total Quantity

12. Unit Wt./Vol.

1. **Non-Hazardous Soil**

No. **1** Type **DT**

**18**

**CY**

2.

3.

4.

13. Special Handling Instructions and Additional Information

**Approval # PHL R-15-063  
Account # for EE phone # is BR31029**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name: **A Lambert**

Signature: *[Signature]*

Month **10** Day **26** Year **15**

15. International Shipments  Import to U.S.  Export from U.S.

Port of entry/exit:  
Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: **SARBIT S BAIN'S**

Signature: *[Signature]*

Month **10** Day **26** Year **15**

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

5. Generator's Name and Mailing Address:

Apartment Properties LLC  
2 Henry Adams Street, Suite 450  
San Francisco, CA 94103 415-509-1441

Generator's Site Address (if different than mailing address)

7544 Dublin Blvd  
Dublin, CA

Generator's Phone:

6. Transporter 1 Company Name

SS BAINS

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Putero Hills Landfill  
3675 Putero Hills Lane  
Susan, CA 94585 707-432-4677

U.S. EPA ID Number

N/A

Facility's Phone:

9. Waste Shipping Name and Description

1. Non-Hazardous Soil

10. Containers

No. Type

11. Total Quantity

12. Unit Wt./Vol.

1

DT

18

CY

13. Special Handling Instructions and Additional Information

Approval # PHLK-15-063  
ACCOUNT # (for ER) 1000 #12 BE.71029

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name

Signature

Month Day Year

12 25 15

INT'L

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

HARDEEP SINGH

Signature

[Signature]

Month Day Year

10 26 15

Transporter 2 Printed/Typed Name

Signature

Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: 14/A  
 2. Page 1 of 2  
 3. Emergency Response Phone: 555-555-5555  
 4. Waste Tracking Number: 14/A 2025

5. Generator's Name and Mailing Address: **in Apartment Properties LLC**  
 2 Harry Adams Street, Suite 450  
 San Francisco, CA 94103 415-509-1441  
 Generator's Site Address (if different than mailing address): **Dublin, CA**

Generator's Phone:  
 6. Transporter 1 Company Name: **Brady Tanks Inc** U.S. EPA ID Number:  
 7. Transporter 2 Company Name: U.S. EPA ID Number:

8. Designated Facility Name and Site Address: **Potrero Hills Landfill**  
 5575 Potrero Hills Lane  
 Sunnyvale, CA 94385 707-432-4627 U.S. EPA ID Number: 14/A  
 Facility's Phone:

9. Waste Shipping Name and Description: **Non-Hazardous Soil**  
 10. Containers: No. 1, Type DT  
 11. Total Quantity: 18  
 12. Unit Wt./Vol.: CY

1. No.	2. Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1.	Non-Hazardous Soil	1	DT	18	CY
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information:  
 Approval # PEILR-15-663  
 Account # for ER phone # is BR51029

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name: **John C. ...** Signature: *[Signature]* Month: 12, Day: 28, Year: 15

15. International Shipments:  Import to U.S.  Export from U.S. Port of entry/exit: Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials  
 Transporter 1 Printed/Typed Name: **JOSE HAINOWSKI** Signature: *[Signature]* Month: 10, Day: 27, Year: 15  
 Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

17. Discrepancy  
 17a. Discrepancy Indication Space:  Quantity  Type  Residue  Partial Rejection  Full Rejection  
 Manifest Reference Number: U.S. EPA ID Number:

17b. Alternate Facility (or Generator): U.S. EPA ID Number:  
 Facility's Phone:  
 17c. Signature of Alternate Facility (or Generator): Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a  
 Printed/Typed Name: Signature: Month: Day: Year:

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY



<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 888-375-5336	4. Waste Tracking Number BT 2822		
5. Generator's Name and Mailing Address Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-369-1441		Generator's Site Address (if different than mailing address) 1549 Dublin Blvd Dublin, CA				
Generator's Phone:						
6. Transporter 1 Company Name Bradley Tanks Inc		U.S. EPA ID Number CAR000221168				
7. Transporter 2 Company Name		U.S. EPA ID Number				
8. Designated Facility Name and Site Address Pobrero Hills Landfill 3675 Pobrero Hills Lane Suisun, CA 94585 707-432-4637		U.S. EPA ID Number N/A				
Facility's Phone:						
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
		No.	Type			
1. Non-Hazardous Soil		1	DT	18	CY	
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information Approval # PBLP-15-005 Account # for EB phone # is EB31029						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's Offeror's Printed/Typed Name Alan Lopez		Signature 		Month 10	Day 26	Year 15
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Rogelio N. Gomez		Signature 		Month 10	Day 27	Year 15
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number: _____						
17b. Alternate Facility (or Generator)		U.S. EPA ID Number				
Facility's Phone: _____						
17c. Signature of Alternate Facility (or Generator)		Signature		Month	Day	Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name		Signature		Month	Day	Year

<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number 823		
5. Generator's Name and Mailing Address Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1461		Generator's Site Address (if different than mailing address) Dublin, CA				
Generator's Phone:						
6. Transporter 1 Company Name <i>Sunwfe Trucking</i>		U.S. EPA ID Number <i>CA12000168149</i>				
7. Transporter 2 Company Name		U.S. EPA ID Number				
8. Designated Facility Name and Site Address <i>Potrero Hills Landfill</i> 3675 Potrero Hills Lane Suisun, CA 94585 707-432-4627		U.S. EPA ID Number N/A				
Facility's Phone:						
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
		No.	Type			
1. <i>Non-Hazardous Soil</i>		1	BT	18	CY	
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information <i>Approval # PH114-13-003</i> <i>Account # for ER phone # is ER31029</i>						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offeror's Printed/Typed Name <i>Alan Lust</i>		Signature <i>[Signature]</i>		Month <i>10</i>	Day <i>26</i>	Year <i>15</i>
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name <i>Walter Ruiz</i>		Signature <i>[Signature]</i>		Month <i>10</i>	Day <i>27</i>	Year <i>15</i>
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
17b. Alternate Facility (or Generator)				U.S. EPA ID Number		
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)				Month	Day	Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name		Signature		Month	Day	Year

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number \_\_\_\_\_ 2. Page 1 of \_\_\_\_\_ 3. Emergency Response Phone \_\_\_\_\_ 4. Waste Tracking Number **2825**

5. Generator's Name and Mailing Address: **Dublin Apartment Properties LLC**  
**2 Henry Adams Street, Suite 450**  
**San Francisco, CA 94103 415-509-1441**  
 Generator's Site Address (if different than mailing address): **Dublin, CA**

Generator's Phone: \_\_\_\_\_  
 6. Transporter 1 Company Name: **VERONICA TRUCKING** U.S. EPA ID Number: **CA000183657**  
 7. Transporter 2 Company Name: \_\_\_\_\_ U.S. EPA ID Number: \_\_\_\_\_

8. Designated Facility Name and Site Address: **Potrero Hills Landfill**  
**3675 Potrero Hills Lane**  
**Suisun, CA 94585 707-432-4627** U.S. EPA ID Number: **N/A**  
 Facility's Phone: \_\_\_\_\_

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. <b>Non-Hazardous Soil</b>	1	DT	18	CT
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information  
**Approval # PELY-15-663**  
**Account # for ER phone # is BR31029**

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.  
 Generator's/Offoror's Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: **10** Day: **26** Year: **15**

15. International Shipments  Import to U.S.  Export from U.S. Port of entry/exit: \_\_\_\_\_ Date leaving U.S.: \_\_\_\_\_  
 Transporter Signature (for exports only): \_\_\_\_\_

16. Transporter Acknowledgment of Receipt of Materials  
 Transporter 1 Printed/Typed Name: **Hild Veronica** Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_  
 Transporter 2 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

17. Discrepancy  
 17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection  
 Manifest Reference Number: \_\_\_\_\_

17b. Alternate Facility (or Generator) U.S. EPA ID Number: \_\_\_\_\_  
 Facility's Phone: \_\_\_\_\_  
 17c. Signature of Alternate Facility (or Generator) \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a  
 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

GENERATOR  
INT'L  
TRANSPORTER  
DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number  
1411

2. Page 1 of 1

3. Emergency Response Phone  
507-575-3538

4. Waste Tracking Number  
811 2824

5. Generator's Name and Mailing Address: **Apartment Properties LLC**  
2 Henry Adams Street, Suite 450  
San Francisco, CA 94103 415-509-1441

Generator's Site Address (if different than mailing address):  
Dublin, CA

Generator's Phone:

6. Transporter 1 Company Name  
**SS BAINS**

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

**Potrero Hills Landfill**  
3675 Potrero Hills Lane  
Suisun, CA 94585 707-432-4627

U.S. EPA ID Number

N/A

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

No.

Type

11. Total Quantity

12. Unit Wt./Vol.

1. Non-Hazardous Sol

1

DI

18

CY

2.

3.

4.

13. Special Handling Instructions and Additional Information

Approval # 24112-13-002  
Account # for ER phone # is ER31029

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offor's Printed/Typed Name

Signature

Month Day Year

10 2 11

INT'L

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

HARDEEP SINGH

HSingh

10

Transporter 2 Printed/Typed Name

Signature

Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number \_\_\_\_\_ 2. Page 1 of \_\_\_\_\_ 3. Emergency Response Phone \_\_\_\_\_ 4. Waste Tracking Number 1821

5. Generator's Name and Mailing Address: Apartment Properties LLC  
2 Henry Arlams Street, Suite 450  
San Francisco, CA 94103 415-509-1001  
 Generator's Site Address (if different than mailing address): Dublin, CA

Generator's Phone: \_\_\_\_\_

6. Transporter 1 Company Name: JBARA TRUCKING U.S. EPA ID Number: KAL000903964

7. Transporter 2 Company Name: \_\_\_\_\_ U.S. EPA ID Number: \_\_\_\_\_

8. Designated Facility Name and Site Address: Potrero Hills Landfill  
3675 Potrero Hills Lane  
Suisun, CA 94585 707-432-4627  
 U.S. EPA ID Number: N/A

Facility's Phone: \_\_\_\_\_

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
	No.	Type			
1. <u>Non-Hazardous Soil</u>	<u>1</u>	<u>BT</u>	<u>18</u>	<u>CY</u>	
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information:  
Approval # PHLF-15-663  
ACCOUNT # for EE phone # is EE31029

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offoror's Printed/Typed Name: Alan Lopez Signature: \_\_\_\_\_ Month: 10 Day: 26 Year: 15

15. International Shipments  Import to U.S.  Export from U.S. Port of entry/exit: \_\_\_\_\_ Date leaving U.S.: \_\_\_\_\_

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: ISRAEL IRWIN Signature: \_\_\_\_\_ Month: 10 Day: 27 Year: 15

Transporter 2 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

17. Discrepancy

17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection

Manifest Reference Number: \_\_\_\_\_

17b. Alternate Facility (or Generator): \_\_\_\_\_ U.S. EPA ID Number: \_\_\_\_\_

Facility's Phone: \_\_\_\_\_

17c. Signature of Alternate Facility (or Generator): \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_ Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 888-375-5336	4. Waste Tracking Number BTI 7820
5. Generator's Name and Mailing Address Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1441		Generator's Site Address (if different than mailing address) 344 Dublin Blvd Dublin, CA		
Generator's Phone:				
6. Transporter 1 Company Name MEL'S TRUCKING	U.S. EPA ID Number			
7. Transporter 2 Company Name	U.S. EPA ID Number			
8. Designated Facility Name and Site Address Potrero Hills Landfill 3675 Potrero Hills Lane San Jose, CA 94585 707-432-4627	U.S. EPA ID Number			N/A
Facility's Phone:				
9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. Non-Hazardous Soil	1	DT	18	CY
2.				
3.				
4.				
13. Special Handling Instructions and Additional Information Approval # PELLF-15-000 Account # for ER phone # is 888 375 5336				
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.				
Generator's/Offoror's Printed/Typed Name <i>John Smith</i>		Signature <i>[Signature]</i>		Month Day Year 10 26 15
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____				
16. Transporter Acknowledgment of Receipt of Materials				
Transporter 1 Printed/Typed Name MEL CASH		Signature <i>[Signature]</i>		Month Day Year 10 27 15
Transporter 2 Printed/Typed Name		Signature		Month Day Year
17. Discrepancy				
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection				
Manifest Reference Number: _____				
17b. Alternate Facility (or Generator)		U.S. EPA ID Number		
Facility's Phone: _____				
17c. Signature of Alternate Facility (or Generator)				Month Day Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a				
Printed/Typed Name		Signature		Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: N/A

2. Page 1 of 1

3. Emergency Response Phone: 800-371-3130

4. Waste Tracking Number: 511 2819

5. Generator's Name and Mailing Address: Dublin Apartment Properties LLC  
2 Henry Adams Street, Suite 450  
San Francisco, CA 94103 415-509-1001

Generator's Site Address (if different than mailing address): 732 Dublin Blvd  
Dublin, CA

Generator's Phone:

6. Transporter 1 Company Name: 1 STAR TRG

U.S. EPA ID Number:

7. Transporter 2 Company Name:

U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Potrero Hills Landfill

3675 Potrero Hills Lane  
Suisun, CA 94585 707-432-4627

U.S. EPA ID Number: N/A

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

No. Type

11. Total Quantity

12. Unit Wt./Vol.

1. Non-Hazardous Soil

1

DT

18

CY

2.

3.

4.

13. Special Handling Instructions and Additional Information

Approval # PHLR-15-563  
Account # (for ER phone # is BR31029)

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offor's Printed/Typed Name: Alan Lambert

Signature: [Signature]

Month Day Year: 10 26 15

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Date leaving U.S.:

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kadar Ali

Signature: [Signature]

Month Day Year: 10 27 15

Transporter 2 Printed/Typed Name:

Signature:

Month Day Year:

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number:

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name:

Signature:

Month Day Year:

112 / WPL1811

<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 888-375-5338	4. Waste Tracking Number BTI 2018		
5. Generator's Name and Mailing Address Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1441		Generator's Site Address (if different than mailing address) 754 Dublin Blvd Dublin, CA				
Generator's Phone:						
6. Transporter 1 Company Name Bradley Tanks inc			U.S. EPA ID Number			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address Potrero Hills Landfill 3675 Potrero Hills Lane Suisun, CA 94585 707-432-4627			U.S. EPA ID Number N/A			
Facility's Phone:						
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
		No.	Type			
1. Non-Hazardous Soil		1	DT	18	CY	
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information Approval # PHLF-15-663 Account # for ER phone # is BR31029						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offeor's Printed/Typed Name Alan H. Sout			Signature 	Month 10	Day 16	Year 12
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Jose Hernandez			Signature 	Month 10	Day 27	Year 12
Transporter 2 Printed/Typed Name			Signature	Month	Day	Year
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
17b. Alternate Facility (or Generator)			U.S. EPA ID Number			
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)			Month	Day	Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name			Signature	Month	Day	Year

GENERATOR  
INT'L  
TRANSPORTER  
DESIGNATED FACILITY



<b>NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 888-375-5336	4. Waste Tracking Number BTI 2801				
5. Generator's Name and Mailing Address Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1441			Generator's Site Address (if different than mailing address) 7544 Dublin Blvd Dublin, CA						
Generator's Phone:									
6. Transporter 1 Company Name Bradley Tanks Inc				U.S. EPA ID Number CAR000221568					
7. Transporter 2 Company Name				U.S. EPA ID Number					
8. Designated Facility Name and Site Address Potrero Hills Landfill 3675 Potrero Hills Lane Susan, CA 94585 707-429-9600				U.S. EPA ID Number N/A					
Facility's Phone:									
9. Waste Shipping Name and Description					10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
					No.	Type			
1.	Non-Hazardous Soil				1	DT	18	CY	
2.									
3.									
4.									
13. Special Handling Instructions and Additional Information Approval # PHLF-15-663 Account # for ER phone # is BF31029									
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.									
Generator's/Offeor's Printed/Typed Name Alan Lambert					Signature 		Month 10	Day 27	Year 15
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____									
16. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name Rodolfo N. Gomez					Signature 		Month 10	Day 27	Year 15
Transporter 2 Printed/Typed Name					Signature		Month	Day	Year
17. Discrepancy									
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
Manifest Reference Number:									
17b. Alternate Facility (or Generator)					U.S. EPA ID Number				
Facility's Phone:									
17c. Signature of Alternate Facility (or Generator)							Month	Day	Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a.									
Printed/Typed Name					Signature		Month	Day	Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

<b>* NON-HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 888-313-3330	4. Waste Tracking Number B11 2802				
5. Generator's Name and Mailing Address Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1401			Generator's Site Address (if different than mailing address) Dublin, CA						
Generator's Phone:									
6. Transporter 1 Company Name Santafe Trucking				U.S. EPA ID Number CA1200168799					
7. Transporter 2 Company Name				U.S. EPA ID Number					
8. Designated Facility Name and Site Address Patrero Hills Landfill 3675 Patrero Hills Lane Susan, CA 94505 707-429-9600				U.S. EPA ID Number N/A					
Facility's Phone:									
9. Waste Shipping Name and Description					10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
					No.	Type			
1.	Non-Hazardous Soil				1	DT	18	DT	
2.									
3.									
4.									
13. Special Handling Instructions and Additional Information Approval # PHLF-15-063 Account # for ER phone # is BR31029									
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.									
Generator's/Offeror's Printed/Typed Name Alan Leal					Signature 			Month Day Year 10 27 15	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____									
16. Transporter Acknowledgment of Receipt of Materials									
Transporter 1 Printed/Typed Name Santiago Ruiz					Signature 			Month Day Year 10 27 15	
Transporter 2 Printed/Typed Name					Signature			Month Day Year	
17. Discrepancy									
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection									
Manifest Reference Number:									
17b. Alternate Facility (or Generator)					U.S. EPA ID Number				
Facility's Phone:									
17c. Signature of Alternate Facility (or Generator)								Month Day Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a									
Printed/Typed Name					Signature			Month Day Year	

GENERATOR	<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 892-375-5330	4. Waste Tracking Number ETI 2804	
	5. Generator's Name and Mailing Address Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1001			Generator's Site Address (if different than mailing address) 7544 Dublin Blvd Dublin, CA		
	Generator's Phone:					
	6. Transporter 1 Company Name VERONICA TRUCKING			U.S. EPA ID Number CAR000183657		
	7. Transporter 2 Company Name			U.S. EPA ID Number		
TRANSPORTER	8. Designated Facility Name and Site Address Potrero Hills Landfill 3675 Potrero Hills Lane Suisun, CA 94585 707-429-9600			U.S. EPA ID Number N/A		
	Facility's Phone:					
	9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
			No.	Type		
	1. Non-Hazardous Soil		1	DT	18	CY
2.						
3.						
4.						
DESIGNATED FACILITY	13. Special Handling Instructions and Additional Information Approval # PHLF-15-063 ACCOUNT # (or ER phone # is ER31029)					
	14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
	Generator's/Offeree's Printed/Typed Name <i>John Bonnet</i>			Signature <i>[Signature]</i>		Month Day Year 10 27 15
	15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:					
	16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name HULL			Signature <i>[Signature]</i>		Month Day Year 10 27 15	
Transporter 2 Printed/Typed Name			Signature		Month Day Year	
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
17b. Alternate Facility (or Generator)			U.S. EPA ID Number			
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)			Signature		Month Day Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name			Signature		Month Day Year	

<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 888-375-5336	4. Waste Tracking Number BTI 2804	
5. Generator's Name and Mailing Address Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1441		Generator's Site Address (if different than mailing address) 7544 Dublin Blvd Dublin, CA			
Generator's Phone:					
6. Transporter 1 Company Name IBAMA TRUCKING			U.S. EPA ID Number CA1000405964		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Potrero Hills Landfill 3875 Potrero Hills Lane Suisun, CA 94585 707-429-9600			U.S. EPA ID Number N/A		
Facility's Phone:					
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. Non-Hazardous Soil		1	BT	18	CY
2.					
3.					
4.					
13. Special Handling Instructions and Additional Information Approval # PHLF-15-663 Account # for ER phone # is BR33029					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offoror's Printed/Typed Name Walter Lambert			Signature <i>[Signature]</i>		Month Day Year 10 17 15
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name IBAMA TRUCKING			Signature <i>[Signature]</i>		Month Day Year 10 27 15
Transporter 2 Printed/Typed Name			Signature		Month Day Year
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number: _____					
17b. Alternate Facility (or Generator)				U.S. EPA ID Number	
Facility's Phone: _____					
17c. Signature of Alternate Facility (or Generator)				Month Day Year	
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name			Signature		Month Day Year

GENERATOR  
 INT'L  
 TRANSPORTER  
 DESIGNATED FACILITY

<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 509-319-3530	4. Waste Tracking Number B11 2817	
5. Generator's Name and Mailing Address Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1441		Generator's Site Address (if different than mailing address) 754 Dublin Blvd Dublin, CA			
Generator's Phone:					
6. Transporter 1 Company Name SS BAINS			U.S. EPA ID Number		
7. Transporter 2 Company Name			U.S. EPA ID Number		
8. Designated Facility Name and Site Address Potrero Hills Landfill 3675 Potrero Hills Lane Suisun, CA 94585 707-432-4627			U.S. EPA ID Number N/A		
Facility's Phone:					
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.
		No.	Type		
1. Non-Hazardous Soil		1	DT	18	CY
2. T. LIC NO: 9D00092					
3.					
4.					
13. Special Handling Instructions and Additional Information Approval # PHLF-15-063 Accord # for ER phone # is ER31029					
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.					
Generator's/Offeror's Printed/Typed Name Stan Robert			Signature 		Month Day Year 10 28 15
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____					
16. Transporter Acknowledgment of Receipt of Materials					
Transporter 1 Printed/Typed Name Hardeep Singh			Signature 		Month Day Year 10 07 15
Transporter 2 Printed/Typed Name			Signature		Month Day Year
17. Discrepancy					
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection					
Manifest Reference Number:					
17b. Alternate Facility (or Generator)			U.S. EPA ID Number		
Facility's Phone:					
17c. Signature of Alternate Facility (or Generator)			Month Day Year		
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a					
Printed/Typed Name			Signature		Month Day Year

GENERATOR  
 TRANSPORTER  
 DESIGNATED FACILITY

<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number <i>N/A</i>	2. Page 1 of <i>1</i>	3. Emergency Response Phone <i>888-375-3336</i>	4. Waste Tracking Number <i>E11 2816</i>		
5. Generator's Name and Mailing Address <i>Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1441</i>		Generator's Site Address (if different than mailing address) <i>1544 Dublin Blvd Dublin, CA</i>				
Generator's Phone:						
6. Transporter 1 Company Name <i>1 STAR TRG</i>			U.S. EPA ID Number			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address <i>Potrero Hills Landfill 3675 Potrero Hills Lane Suisun, CA 94585 707-432-4627</i>			U.S. EPA ID Number <i>N/A</i>			
Facility's Phone:						
9. Waste Shipping Name and Description						
		10. Containers		11. Total	12. Unit	
		No.	Type	Quantity	Wt./Vol.	
1.	<i>Non-Hazardous Soil</i>		<i>1</i>	<i>DT</i>	<i>18 CY</i>	
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information <i>Approval # PHLF-15-063 Account # for ER phone # is BR31029</i>						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offeror's Printed/Typed Name <i>[Signature]</i>			Signature <i>[Signature]</i>	Month <i>10</i>	Day <i>26</i>	Year <i>15</i>
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name <i>Kudat Ali</i>			Signature <i>[Signature]</i>	Month <i>10</i>	Day <i>11</i>	Year <i>15</i>
Transporter 2 Printed/Typed Name			Signature	Month	Day	Year
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
17b. Alternate Facility (or Generator)			U.S. EPA ID Number			
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)			Month	Day	Year	
18. Designated Facility Owner or Operator. Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name			Signature	Month	Day	Year

GENERATOR  
 INT'L  
 TRANSPORTER  
 DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

4. Waste Tracking Number

5. Generator's Name and Mailing Address

Dublin Apartment Properties LLC  
2 Henry Adams Street, Suite 450  
San Francisco, CA 94103 415-509-1401

Generator's Site Address (if different than mailing address)

7344 Dublin Blvd  
Dublin, CA

Generator's Phone:

6. Transporter 1 Company Name

*M&S Trucking*

U.S. EPA ID Number

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address

Potrero Hills Landfill  
3675 Potrero Hills Lane  
Suisun, CA 94585 707-432-4627

U.S. EPA ID Number

N/A

Facility's Phone:

9. Waste Shipping Name and Description

10. Containers

No. Type

11. Total Quantity

12. Unit Wt./Vol.

1. Non-Hazardous Soil

1

DT

18

CY

2.

3.

4.

13. Special Handling Instructions and Additional Information

Approval # PHLF-15-663  
Account # for KR phone # is BR31029

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name

Signature

Month Day Year

10 10 15

15. International Shipments

Import to U.S.

Export from U.S.

Port of entry/exit:

Transporter Signature (for exports only):

Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name

Signature

Month Day Year

10 27 15

Transporter 2 Printed/Typed Name

Signature

Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space

Quantity

Type

Residue

Partial Rejection

Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)

U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)

Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name

Signature

Month Day Year

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: N/A  
 2. Page 1 of 1  
 3. Emergency Response Phone: 888-375-3330  
 4. Waste Tracking Number: 811 2812

5. Generator's Name and Mailing Address: Dublin Apartment Properties LLC  
 2 Henry Adams Street, Suite 450  
 San Francisco, CA 94103 415-509-1441  
 Generator's Site Address (if different than mailing address): 1544 Dublin Blvd  
 Dublin, CA

Generator's Phone:  
 6. Transporter 1 Company Name: Bradley Tanks LLC  
 U.S. EPA ID Number: 32

7. Transporter 2 Company Name:  
 U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Potrero Hills Landfill  
 3675 Potrero Hills Lane  
 Suisun, CA 94585 707-432-4627  
 U.S. EPA ID Number: N/A  
 Facility's Phone:

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. Non-Hazardous Soil	1	DT	18	DT
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information:  
 Approval # PHLP-15-663  
 Account # for ER phone # is BR31029  
 Clean up Log

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offor's Printed/Typed Name: [Signature]  
 Signature: [Signature]  
 Month: 10 Day: 26 Year: 13

15. International Shipments:  Import to U.S.  Export from U.S.  
 Port of entry/exit:  
 Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials  
 Transporter 1 Printed/Typed Name: Jose Hernandez  
 Signature: [Signature]  
 Month: 10 Day: 28 Year: 13  
 Transporter 2 Printed/Typed Name:  
 Signature:  
 Month: Day: Year:

17. Discrepancy  
 17a. Discrepancy Indication Space:  Quantity  Type  Residue  Partial Rejection  Full Rejection  
 Manifest Reference Number:

17b. Alternate Facility (or Generator):  
 U.S. EPA ID Number:  
 Facility's Phone:

17c. Signature of Alternate Facility (or Generator):  
 Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a.  
 Printed/Typed Name: Signature: Month: Day: Year:



<b>NON-HAZARDOUS WASTE MANIFEST</b>	1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone	4. Waste Tracking Number		
5. Generator's Name and Mailing Address		Generator's Site Address (if different than mailing address)				
Dublin Apartment Properties LLC 2 Henry Adams Street, Suite 450 San Francisco, CA 94103 415-509-1641		Dublin, CA				
Generator's Phone:						
6. Transporter 1 Company Name		U.S. EPA ID Number				
Bradley Tanks Inc		CAR000224568				
7. Transporter 2 Company Name		U.S. EPA ID Number				
8. Designated Facility Name and Site Address		U.S. EPA ID Number				
Potrero Hills Landfill 3875 Potrero Hills Lane Suisun, CA 94585 707-432-4627		N/A				
Facility's Phone:						
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
		No.	Type			
1. Non-Hazardous Soil		1	DT	18	CY	
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information						
Approval # PHLF-15-063 Account # for HF phone # is ER31029						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offoror's Printed/Typed Name		Signature		Month	Day	Year
[Signature]		[Signature]		10	27	15
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name		Signature		Month	Day	Year
Rogelio H. Jimenez		[Signature]		10	28	15
Transporter 2 Printed/Typed Name		Signature		Month	Day	Year
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
17b. Alternate Facility (or Generator)				U.S. EPA ID Number		
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)				Month	Day	Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name		Signature		Month	Day	Year

GENERATOR  
 INT'L  
 TRANSPORTER  
 DESIGNATED FACILITY

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: N/A  
 2. Page 1 of 1  
 3. Emergency Response Phone: 888-375-3336  
 4. Waste Tracking Number: E11 2814

5. Generator's Name and Mailing Address: Dublin Apartment Properties LLC  
 2 Henry Adams Street, Suite 450  
 San Francisco, CA 94103 415-588-1441  
 Generator's Site Address (if different than mailing address): 1544 Dublin Blvd  
 Dublin, CA

Generator's Phone: \_\_\_\_\_

6. Transporter 1 Company Name: Bradley Tanks Inc  
 U.S. EPA ID Number: \_\_\_\_\_

7. Transporter 2 Company Name: \_\_\_\_\_  
 U.S. EPA ID Number: \_\_\_\_\_

8. Designated Facility Name and Site Address: Potrero Hills Landfill  
 3675 Potrero Hills Lane  
 Suisun, CA 94585 707-432-4627  
 U.S. EPA ID Number: N/A  
 Facility's Phone: \_\_\_\_\_

9. Waste Shipping Name and Description	10. Containers		11. Total Quantity	12. Unit Wt./Vol.
	No.	Type		
1. Non-Hazardous Soil	1	DT	18	CY
2.				
3.				
4.				

13. Special Handling Instructions and Additional Information:  
 Approval # PHLF-15-663  
 Account # for ER phone # is BR31029

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offor's Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Month: 10 Day: 27 Year: 15

GENERATOR

15. International Shipments  Import to U.S.  Export from U.S. Port of entry/exit: \_\_\_\_\_  
 Transporter Signature (for exports only): \_\_\_\_\_ Date leaving U.S.: \_\_\_\_\_

INT'L

16. Transporter Acknowledgment of Receipt of Materials  
 Transporter 1 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Month: 10 Day: 28 Year: 15  
 Transporter 2 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

TRANSPORTER

17. Discrepancy  
 17a. Discrepancy Indication Space  Quantity  Type  Residue  Partial Rejection  Full Rejection  
 Manifest Reference Number: \_\_\_\_\_

↑

17b. Alternate Facility (or Generator): \_\_\_\_\_ U.S. EPA ID Number: \_\_\_\_\_  
 Facility's Phone: \_\_\_\_\_

DESIGNATED FACILITY

17c. Signature of Alternate Facility (or Generator): \_\_\_\_\_  
 Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a  
 Printed/Typed Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
 Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

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**ATTACHMENT I**

DSRSD Industrial Wastewater Discharge Permit & Disposal Log

## Tino Maestas

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**From:** Judy Zavadil <zavadil@dsrsd.com>  
**Sent:** Tuesday, October 27, 2015 9:40 AM  
**To:** Tino Maestas; Erik Kuefner  
**Cc:** Matt Marks; doug.bablitch@amecfw.com; Steven Delight; Dan McIntyre  
**Subject:** RE: Magnus Pacific: Request for Waiver to Discharge to the DSRSD Sanitary Sewer

Tino,

As Acting District Engineer I approve your request for a waiver to discharge wastewater with a total dissolved solids concentration exceeding 1000 mg/l. Please work with Erik Kuefner on the location, timing and rate of disposal of the drilling fluid.

Regards,

Judy Zavadil  
Principal Civil Engineer  
Dublin San Ramon Services District  
7051 Dublin Blvd, Dublin, CA 94568  
925-875-2272

---

**From:** Tino Maestas [<mailto:TMaestas@magnuspacific.com>]  
**Sent:** Monday, October 26, 2015 3:39 PM  
**To:** Erik Kuefner <[kuefner@dsrsd.com](mailto:kuefner@dsrsd.com)>  
**Cc:** Judy Zavadil <[zavadil@dsrsd.com](mailto:zavadil@dsrsd.com)>; Matt Marks <[MMarks@magnuspacific.com](mailto:MMarks@magnuspacific.com)>; [doug.bablitch@amecfw.com](mailto:doug.bablitch@amecfw.com)  
**Subject:** Magnus Pacific: Request for Waiver to Discharge to the DSRSD Sanitary Sewer

Judy,

Attached is our request for waiver. Please let me now if you require a more formal process that may be required for your review and approval.

We are hopeful to receive approval for our request as soon as possible to continue our demobilization progress this week.

I am available whenever necessary to provide further information, clarify concerns, or otherwise expedite your review. The analytical data in support of our request has been submitted to Erik. I have re-submitted this information at attachments to this email.

You can call me directly at 916-471-8210.

Thank you,



**TINO B MAESTAS, P.E.**

Project Director

6558 Lonetree Blvd, Rocklin, CA 95765

Office: 916.462.6419

Cell: 916.471.8210

[magnuspacific.com](http://magnuspacific.com)

---

**From:** Erik Kuefner [<mailto:kuefner@dsrsd.com>]

**Sent:** Monday, October 26, 2015 11:47 AM

**To:** Tino Maestas

**Cc:** Judy Zavadil

**Subject:** RE: 150019. - C&T Data (270885)

Hi Tino,

I heard back from the Acting District Engineer, Judy Zavadil. I've cc'd her on this email, so if you attach the request to waive the TDS local limit, go ahead and "reply all".

Thanks,

Erik

---

**From:** Tino Maestas [<mailto:TMaestas@magnuspacific.com>]

**Sent:** Saturday, October 24, 2015 8:24 AM

**To:** Erik Kuefner <[kuefner@dsrsd.com](mailto:kuefner@dsrsd.com)>

**Subject:** FW: 150019. - C&T Data (270885)

Hi Eric,

We continue to have high concentrations of TDS. After further inquiry, this is attributed to our drilling fluid matrix. The guar gum that we use for manufacturing our slurry is the dissolved solids portion.

I would appreciate any expertise that you may offer. In the mean time, I am in discussion with a few of my water treatment specialist to see what I can do to reduce the TDS concentration. I am also looking into disposal at East Bay Municipal Utility District of the fluid as-is.

Does the DSRSD offer direct-disposal?

Anyway, we are not discharging this weekend.

I will call you on Monday to discuss.

Tino

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**From:** Will Rice [<mailto:will.rice@ctberk.com>]

**Sent:** Friday, October 23, 2015 5:25 PM

**To:** Tino Maestas

**Subject:** 150019. - C&T Data (270885)


Hi Tino,

Please find attached the following files:

- Invoice
- Chain of Custody
- PDF Deliverable

C&T sends its e-reports via the Internet as Portable Document Format (PDF) files. Reports in this format, when accompanied by a signed cover page, are considered official reports. **No hardcopy reports will be sent either by fax or U.S. Postal Service unless otherwise requested.** You may distribute your PDF files electronically or as printed hardcopies, as long as they are distributed in their entirety.

"I 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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Company Officer: Name: Matthew D. Marks  
Title: Vice President/Regional Manager  
Signature:   
Date: 10/30/15

Date	Time	Quantity (GAL)	Cummulative Quantity (GAL)
10/27/2015	2:50 PM	1700	1700
10/27/2015	3:40 PM	1700	3400
10/27/2015	4:20 PM	1700	5100
10/28/2015	8:45 AM	1700	6800
10/28/2015	9:35 AM	1700	8500
10/28/2015	10:25 AM	1700	10200
10/28/2015	11:50 AM	1700	11900
10/28/2015	1:30 PM	1700	13600
10/28/2015	1:50 PM	3700	17300
10/28/2015	2:00 PM	1700	19000
10/28/2015	3:20 PM	3700	22700
10/28/2015	3:30 PM	1700	24400
10/28/2015	4:20 PM	3700	28100
10/28/2015	4:50 PM	1700	29800
10/29/2015	7:40 AM	1700	31500
10/29/2015	7:50 AM	3700	35200
10/29/2015	11:30 AM	2000	37200
<b>TOTAL (GAL)</b>		<b>37200</b>	

Note: volumetric discharge estimated by the number of loads discharged by a water truck. Magnus used a 2,000-GAL capacity water truck and 4,000-GAL capacity water truck throughout discharge of wastewater to the DSRSD sanitary sewer. The total volume is a reasonable estimate compared to the capacity of the storage tanks. Magnus had (2) 21,000-GAL capacity frac tanks on-site which each was holding approximately 18,000-GAL/ea.





Magnus Pacific, LLC  
 6558 Lonetree Blvd.  
 Rocklin, CA 95765  
 magnuspacific.com

A GREAT LAKES  
 DREDGE & DOCK  
 COMPANY

JOB \_\_\_\_\_  
 SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SCALE \_\_\_\_\_

10-27-2015

Trk Count For Spoils

Trk	Time	Lic #	Trk	Time	Lic #
1	7:40am	WP41891	9	10:48	WP41890
2	7:50	WP01007	10	10:57	WP01007
3	7:58	9E36787	11	11:06	9E36787
4	8:05	9D67408	12	11:35	9D67408
5	8:14	9D00092	13	11:48	WP35685
6	8:24	WP35685 9E65477	14	11:59	9D00092
7	8:35	9E65471	15	12:27	9E79685
8	9:05	9E79685	16	12:50	9E65471
First Load			Second Load		

Water Removed Off Site

Trk	Time	Approx gals	End Time
1	2:50pm	1700	3:30pm
2	3:40pm	1700	4:10pm
3	4:20pm	1700	4:50pm



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 Rocklin, CA 95765  
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 DREDGE & DOCK  
 COMPANY

JOB \_\_\_\_\_  
 SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 SCALE \_\_\_\_\_

10-28-2015

Spoil Truck Count

Trk	Time	Lic#
1	740am	WP41891
2	750am	WP01007
3	11am	WP41891

Trk	Time	Gals	Time
1	8:45am	1700	9:20am
2	9:35	1700	10am
3	10:25	1700	1050
4	11:50	1700	1250pm
5	1:30pm	1700	155
6	150pm	3700	300
7	2pm	1700	320
8	320	3700	410
9	330	1700	430
10	420	3700	510
11	450	1700	510

← Got trash pump hooked up



Magnus Pacific, LLC  
6558 Lonetree Blvd.  
Rocklin, CA 95765  
magnuspacific.com

A GREAT LAKES  
DREDGE & DOCK  
COMPANY

JOB \_\_\_\_\_  
SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_  
SCALE \_\_\_\_\_

10-29-2015

Water Disposal

Trk	Time	Gallons	End Time
1	7:40 AM	1700	8:05 AM
2	7:50 AM	3700	8:40 AM
3	11:30 AM	2000	12:40 AM



DUBLIN SAN RAMON SERVICES DISTRICT  
PRETREATMENT PROGRAM  
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT # 15018

Effective Date: October 12, 2015  
Expiration Date: March 31, 2016

Permit Fee: \$740.00

IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THE DUBLIN SAN RAMON SERVICES DISTRICT'S SEWAGE CODE (TITLE 5, CHAPTER 5.20), AND ALSO WITH ANY AND ALL APPLICABLE PROVISIONS OF FEDERAL AND/OR STATE LAWS OR REGULATIONS, PERMISSION IS HEREBY GRANTED TO:

MAGNUS PACIFIC LLC  
6558 LONETREE BLVD.  
ROCKLIN, CA 95765

SIC CLASSIFICATION: 1794 (Excavation Work)

FOR THE DISPOSAL OF WASTEWATER INTO THE SANITARY SEWER AT THE SITE ADDRESS OF:

7544 DUBLIN BLVD.  
DUBLIN, CA AND 94568

DISCHARGER UNDERSTANDS ALL THE CONDITIONS OF THIS PERMIT AND AGREES TO COMPLY WITH THESE CONDITIONS AND THE DISTRICT'S SEWAGE CODE (TITLE 5, CHAPTER 5.20). FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT MAY BE GROUNDS FOR ADMINISTRATIVE ACTION, OR ENFORCEMENT PROCEEDINGS INCLUDING CIVIL OR CRIMINAL PENALTIES, INJUNCTIVE RELIEF, PERMIT REVOCATION AND SUMMARY ABATEMENTS.

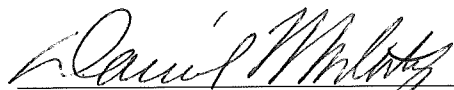
IN ADDITION, THE DISCHARGER UNDERSTANDS THAT COMPLIANCE WITH THIS PERMIT DOES NOT RELIEVE THE DISCHARGER FROM COMPLIANCE WITH ANY AND ALL LOCAL, STATE AND FEDERAL PRETREATMENT STANDARDS AND REQUIREMENTS INCLUDING ANY SUCH STANDARDS OR REQUIREMENTS THAT MAY BECOME EFFECTIVE DURING THE TERM OF THIS PERMIT.

COMPANY OFFICER:

  
TINO MAESTAS  
PROJECT DIRECTOR

10/12/15  
DATE

DISTRICT REPRESENTATIVE:

  
DANIEL McINTYRE  
DISTRICT ENGINEER

10/12/15  
DATE

**PART 1-GENERAL INFORMATION**

MAILING ADDRESS

Street: 6558 Lonetree Blvd  
 City: Rocklin State: CA Zip: 95765

BUSINESS ADDRESS

Street: Same  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

CORPORATE INFORMATION (If Applicable)

Corporate Address: 6558 Lonetree Blvd  
 City: Rocklin State: CA Zip: 95765  
 State of Incorporation: California  
 Corporate Agent: Matthew Marks  
 Agent Address: Same  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Agent Phone #: 916-462-6423

PROPERTY OWNER

Name: Dublin Apartment Properties LLC  
 Address: 2 Henry Adams Street, Suite 450  
 City: San Francisco State: CA Zip: 94103

Chief Executive Officer, General Partner, or Proprietor

Name: Louay Owaidat Title: President  
 Address: 6558 Lonetree Blvd  
 City: Rocklin State: CA Zip: 95765

PERSON TO SIGN THIS PERMIT

Name: Tino Maestas Title: Project Director  
 Phone #:(Day) 916-471-8210 (Night) Same

PERSON TO BE CONTACTED ABOUT THIS PERMIT

Name: Tino Maestas Title: Project Director  
 Phone #:(Day) 916-471-8210 (Night) Same

PERSON TO BE CONTACTED IN CASE OF EMERGENCY

Name: Tino Maestas Title: Project Director  
 Phone #:(Day) 916-471-8210 (Night) Same

TYPE OF BUSINESS OR OPERATION:

Specialty Geotechnical & Environmental General Contractor  
 \_\_\_\_\_  
 \_\_\_\_\_

DESCRIPTION OF APPLICABLE PROCESSES:

PROCESS DESCRIPTION	40 CFR PROCESS
Permeable Reactive Barrier Installation	N/A

## **PART 2 - FEES AND CHARGES**

The Discharger identified on the title page of this permit is hereby given authorization to discharge industrial/commercial wastewater into the sanitary sewer provided that:

- a. The Discharger makes payment of sewer service charges in association with the industrial/commercial wastewater discharge. Sewer service charges are based on the flow and strength of the wastewater. The strength of the wastewater is measured by the Biochemical Oxygen Demand (BOD) and the Total Suspended Solids (TSS) analyses.
- b. The Discharger makes payment of the fees associated with the administration of this permit. Fees shall include, but not limited to, permit fees, inspection fees and sampling & analysis fees. Other fees may apply as a result of escalated enforcement action.

## **PART 3 - MONITORING REQUIREMENTS**

### **I. DISCHARGE LIMITATIONS**

- a. **Only wastewater generated from the the installation of the Permeable Reactive Barrier is permitted. No domestic and/or industrial/commercial wastewaters are granted under this permit.**
- b. The rate of discharge shall **not** exceed 100 gallons per minute (gpm).
- c. The Discharger shall also comply with the prohibited discharges referenced in Title 5, Chapter 5.20 of the District Code.
- d. The volume of wastewater discharged to the sanitary sewer shall be documented as required in Part 4, Section IV. of this permit.

The Discharger shall comply with all discharge limitations referenced in Appendix A of this permit as they apply to any facility discharge which is analyzed by approved methods and/or permit conditions.

The Discharger shall also comply with the prohibited discharges referenced in Title 5, Chapter 5.20 of the District Code.

### **II. REPRESENTATIVE SAMPLING**

Effluent samples collected for analyses shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring point(s) specified in this permit and, unless otherwise specified, before the effluent joins or is diluted by any other wastestream, body of water or substance. All equipment used for sampling must be routinely inspected and maintained to ensure their accuracy.

sampling must be routinely inspected and maintained to ensure their accuracy.

### III. SAMPLING AND ANALYSIS

The Discharger shall comply with the following sampling and analysis requirements:

- a. The facility's wastewater discharge shall be sampled, at a minimum, according to the required sampling frequency outlined in Appendix A. Unless otherwise specified, all sampling required by this permit will be performed by District staff.
- b. All samples for the pollutants listed in Appendix A of this permit shall be taken at the designated sampling location(s) referenced in Appendix B of this permit.
- c. All handling, preservation, and holding times of collected samples and laboratory analyses of samples shall be performed in accordance with 40 CFR, Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this permit. In addition, all samples shall be delivered as soon as possible to the certified laboratory, but never shall the delivery of the samples to the laboratory exceed twenty-four (24) hours from the time the samples were obtained.
- d. The laboratory selected to perform the analyses must be certified by the State of California Department of Health Services for wastewater analyses.

### IV. VIOLATION RESAMPLING

If the results of any wastewater analysis performed by, or at the direction of, the Discharger indicates that a violation of this permit has occurred, the Discharger must:

- a. Inform the District of the violation within 24 hours of becoming aware of the violation; and
- b. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within thirty (30) days from the date the Discharger first becomes informed of the violation.

Currently, the District performs all monitoring requirements on behalf of the Discharger, including resampling. However, in the event of District notification to the Discharger that the District will no longer perform the monitoring, the Discharger is responsible for the required sampling as listed in Appendix A, as well as violation resampling requirements.

#### PART 4 - REPORTING REQUIREMENTS

The Discharger shall notify the District **at least 48 hours prior** to the actual discharge.

##### I. MONITORING REPORTS

If the Discharger monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR, Part 136 or amendments thereto, or otherwise approved by the EPA, or as specified in this permit, the results of such monitoring shall be submitted within 45 days of the monitoring date to the District to determine compliance with all discharge limits as referenced in Appendix A. The monitoring results shall be submitted with the Signatory Requirement referenced in Part 5, Section XI. of this permit. Also, these monitoring results shall be included in the calculations to determine if and when the Discharger is in "Significant Noncompliance".

##### II. ACCIDENTAL DISCHARGE REPORT

The Discharger shall notify the District immediately, **by telephone**, upon becoming aware of the occurrence of any accidental discharge of substances prohibited by this permit or the District Code or of any **slug discharges** or spills that may enter the sanitary sewer. The Discharger shall call the following telephone number to notify the District of such discharges:

(925) 846-4565 (24 hours a day)

The telephone message must include the following information:

- a. Business name, contact person, and telephone number.
- b. Location and time of discharge.
- c. Composition of the waste including hazardous properties.
- d. Concentration and volume.
- e. Immediate corrective actions taken.
- f. Any other information deemed relevant.

Within five (5) days following the accidental discharge the Discharger shall submit to the District a detailed written report. The report shall provide the following information:

- a. Description and cause of the upset, **slug load** or accidental discharge. The description shall include the location of the discharge, and the composition, concentration and volume of waste.
- b. Duration of noncompliance, including exact dates and times of noncompliance and, if the noncompliance is continuing, the time by which compliance is reasonably expected to occur.



- c. All steps taken, or to be taken, to reduce, eliminate, and/or prevent recurrence of such an upset, **slug load**, accidental discharge, or other conditions of noncompliance.
- d. Any information deemed relevant.

It shall be the responsibility of the Discharger to notify the District of any unusual discharge whether or not the Discharger is aware of any possible impact to the District's facilities or operations.

The Discharger's notification to the District of accidental discharges does not relieve the Discharger of other reporting requirements in accordance with local, state, or federal laws.

### III. BYPASS OF TREATMENT FACILITIES

- a) Bypass is prohibited unless it is unavoidable to prevent loss of life, personal injury, or severe property damage or no feasible alternatives exist.
- b) Notification of bypass:
  - (1) Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior written notice, at least ten days before the date of the bypass, to the District.
  - (2) Unanticipated bypass. The Discharger shall immediately notify, the District, **by telephone**, and submit written notice to the District within 5 days. This report shall specify:
    - (i) A description of the bypass, and its cause, including its duration;
    - (ii) Whether the bypass has been corrected; and
    - (iii) The steps being taken or to be taken to reduce, eliminate and prevent a reoccurrence of the bypass.
- c) The Discharger may allow bypass to occur which does not cause effluent limitations to be exceeded, but only if it is also for essential maintenance to assure efficient operation. These bypasses are not subject to paragraphs (a) and (b) of this section.

IV. DISCHARGE REPORT

The Discharger shall submit a discharge report to the District documenting certain activities, which occurred during that month. The monthly report shall be due at the District Office within thirty (30) days after the month's end and shall include the following:

- a. A log documenting the volume of treated wastewater discharged to the sanitary sewer during the reporting period.
- b. The submission, by an authorized representative, of the Signatory Requirement referenced in Part 5, Section XI. of this permit.

**All reports required by this permit shall be submitted, along with the signatory requirement reference in Part 5, Section XI. of this permit to Dublin San Ramon Services District at the following address:**

Dublin San Ramon Services District, RWTF  
7399 Johnson Drive  
Pleasanton, CA 94588  
ATTENTION: Environmental Compliance Section

**PART 5 - STANDARD CONDITIONS**

I. INSPECTION AND ENTRY

The Discharger shall grant the District staff or authorized representatives entrance to the permitted facility for the purposes of inspection and sampling at all reasonable times. The inspection shall include the examination of all files pertaining to the requirements contained within this permit and the District's Sewerage Code and/or the examination of all sources of industrial wastewater discharge.

In addition, the Discharger shall inform District staff of the facility's safety procedures and requirements including the use of personal protective equipment.

II. DILUTION

The Discharger shall not increase the use of potable or process water or, in any way, attempt to dilute an effluent as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained within this permit, any National Pretreatment Standards, or any other wastewater effluent limitation developed by the District or State.

### III. FACILITY MODIFICATION/CHANGES

The Discharger shall notify the District at least 30 days prior to any facility expansion, production increase, or process modification which results in new or substantially increased wastewater discharges or a change in the nature of the wastewater discharge.

Furthermore, the Discharger **shall obtain prior approval from the District** before discharging any new sources of wastewater, wastewater discharges that have substantially increased in volume, and/or any source of wastewater that has changed in nature.

### IV. ANTICIPATED NONCOMPLIANCE

The Discharger shall give notice to the District at least 30 days prior to any planned changes in the permitted facility or activity, which may result in noncompliance with the requirements in this permit.

### V. HAZARDOUS AND NON-SEWERABLE WASTES

Solids, sludge, filter backwash, non-sewerable wastewater, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in accordance with all applicable state, federal and local laws. Spent chemical solutions, and any toxic or hazardous wastes shall be either disposed of at an authorized site by a properly licensed hazardous waste hauler, or recycled by a properly licensed recycler. No discharge of untreated spent chemical solutions and/or hazardous wastes to the public sewer is permitted.

### VI. SPILL PROTECTION

The Discharger shall provide adequate protection including, but not limited to, secondary containment for all hazardous chemicals, hazardous waste and non-sewerable wastes which are stored in areas where potential spills could reach the facility's floor drains.

### VII. OPERATIONS AND MAINTENANCE

The Discharger shall properly operate and maintain all pretreatment facilities that were installed or used to achieve compliance with this permit.

### VIII. RECORDS/LOGS

The Discharger shall maintain logs and records of all data pertaining to the operations and maintenance activities implemented for the purpose of achieving compliance with this permit. Such documentation shall include, but not limited to, records/logs for calibrations, spent chemical bath solutions, flow data, water usage data, chemical

dose rates, routine maintenance of equipment, routine treatment process checks, analyses and process changes, as they pertain to the process wastewaters discharged from the facility.

#### IX. RECORDS RETENTION

The Discharger shall retain all records pertaining to the requirements set forth in this permit including, but not limited to, effluent sampling and analysis data, reports, calibration and maintenance records, logs, all original strip chart recordings for continuous monitoring instruments and receipts for off-haul of hazardous and non-sewerable wastes for a period of three (3) years.

These records shall be made available to officials of the EPA, State and the District or their authorized representatives.

In addition, all records pertaining to any investigation or enforcement action brought by the EPA, State or the District shall be retained for a minimum of three (3) years from the date of the conclusion of the investigation or enforcement action.

#### X. PERMIT MODIFICATIONS

The District reserves the right to revise this permit if deemed necessary to comply with objectives presented in the District Code. No revision of the limitations or requirements hereunder shall subject the District to civil liability or penalty for interference with a vested right of the Discharger. This permit may be modified only by the District.

#### XI. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to the District must contain the following certification statement followed by the signature and title of the officer representing the Discharger and the date the document was signed:

"I 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 gathered and evaluated 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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

## XII. CONFIDENTIALITY

The Discharger may request that documents submitted to the District, which may disclose restricted information or restricted processes, to be kept confidential and **not** available to the public. However, these documents shall be available upon request to other governmental agencies in affiliation with the EPA Pretreatment Program and/or the National Pollutant Discharge Elimination System (NPDES). In addition, these documents shall be made available in enforcement procedures by the District, Federal and/or the State or state agency implicating the Discharger.

Pretreatment records such as reports, questionnaires/permit applications, permits, inspection reports, violation notices, enforcement actions, wastewater flow and effluent data shall not be considered confidential.

## XIII. TRANSFERABILITY

This Industrial Wastewater Discharge Permit is non-transferable and valid only to the industry and owner to whom it is originally issued. Transfer of ownership, changes to any industrial processes, or a significant change of wastewater quality shall void the permit.

## XIV. ENFORCEMENT

Section 5.20.520 (B) of the District Code provides that any Discharger who violates a permit condition is subject to civil penalties not to exceed Twenty Five Thousand Dollars (\$25,000) for each day of such violations. Section 5.20.560 (B) of the District Code provides that any person who willfully or negligently violates permit conditions is subject to criminal penalties of a fine not to exceed One Thousand Dollars (\$1,000) per day of violation, or by imprisonment in the county jail not to exceed six (6) months, or both. The Discharger may also be subject to sanctions under State and/or Federal Law.

In addition to civil and criminal liability, the Discharger violating any of the provisions of this permit or Title 5 of the District Code or causing damage to or otherwise inhibiting the District's wastewater disposal system shall be liable to the District for any expense, loss, or damage caused by such violation or discharge. The District shall bill the Discharger for the costs incurred by the District for any cleaning, repair, or replacement work caused by the violation or discharge. Refusal to pay the assessed costs shall constitute a separate violation of Section 5.20.520 (E) of the District Code.

XV. DUTY TO REAPPLY

If the activities regulated by this permit are planned, or anticipated, to be continued after the expiration date of this permit, the Discharger must submit a written request for the issuance of a new permit at least thirty (30) days prior to the expiration date of this permit.

XVI. CONTINUATION OF EXPIRED PERMITS

An expired permit shall continue to be effective and enforceable until a new permit has been reissued if:

- a. The Discharger has submitted a completed permit application **at least 30 days** prior to the expiration of the Discharger's current permit.
- b. The failure to reissue the new permit, prior to the expiration of the previous permit, is not due to any act or failure to act on the part of the Discharger.

XVII. ANNUAL PUBLICATION

As required by the Federal Pretreatment Regulations (40 CFR 403.8(f)(2)(viii)) the District shall comply with the public participation requirements of 40 CFR Part 25. Subsequently, any industrial/commercial user determined to be in "Significant Noncompliance" with applicable pretreatment requirements at any time during the last twelve (12) months shall be published in the largest newspaper circulated in the District's service area. Appendix C defines the criteria used to determine "Significant Noncompliance".

**APPENDIX A**

**DISCHARGE LIMITATIONS**

## APPENDIX A

MAGNUS PACIFIC LLC

PERMIT# 15018

The table below lists the maximum concentrations allowed to be discharged into the sanitary sewer per the District code and federal regulations. Local limits apply as instantaneous maximum values for grab samples, and as daily maximum values for composite samples. Currently, the District performs all monitoring requirements on behalf of the Discharger. However, in the event of District notification to the Discharger that the District will no longer perform the monitoring, the Discharger is responsible for the required sampling frequency as listed below, as well as violation resampling requirements as specified in Part 3, Section 4 of this permit.

The last column indicates the required sampling frequency. "--" indicates that these pollutants are not sampled on a routine basis. However, this **does not** relieve the Discharger from also complying with these limits. The District reserves the right to sample for any local limit pollutant.

POLLUTANT	LOCAL LIMIT mg/l	FEDERAL LIMIT		SAMPLE TYPE	REQUIRED SAMPLING FREQUENCY
		DAILY MAX mg/l	AVG mg/l		
ARSENIC	0.50	NA	NA	G	--
CADMIUM	1.00	NA	NA	G	--
CHROMIUM	1.00	NA	NA	G	--
COPPER	1.00	NA	NA	G	--
LEAD	2.00	NA	NA	G	--
MERCURY	0.010	NA	NA	G	--
NICKEL	1.50	NA	NA	G	--
SELENIUM	1.30	NA	NA	G	--
SILVER	1.50	NA	NA	G	--
ZINC	4.00	NA	NA	G	--
CYANIDE	0.50	NA	NA	G	--
PHENOLS	20.0	NA	NA	G	--
T.I.C.H. (608)	0.02	NA	NA	G	--
PCBs (608)	0.01	NA	NA	G	--
* T.T.O. (624 ONLY)	5.00*	NA*	NA*	G & C	PER BATCH
PAH (610)	6.50	NA	NA	C	--
OIL/GREASE (HYDROCARBON) (ANIMAL/VEG.)	150 200	NA	NA	G	--
TPH-GAS & TPH-DIESEL	15.0	NA	NA	G & C	--
EPA 602 (BTEX)	1.00	NA	NA	G	--
TOTAL DISSOLVED SOLIDS (TDS)	1000	NA	NA	C	--
RADIOACTIVITY	NA	FS	FS	C	--
TOTAL SULFIDES	2.0	NA	NA	C	--
B.O.D.	NA	NA	NA	C	--
C.O.D.	NA	NA	NA	C	--
T.S.S.	NA	NA	NA	C	--
pH	MIN. 6.0** MAX. 11.0**	NA NA	NA NA	G	PER BATCH

NA = NOT APPLICABLE  
 G = GRAB  
 C = COMPOSITE  
 PAH = POLYNUCLEAR AROMATIC HYDROCARBONS  
 TPH = TOTAL PETROLEUM HYDROCARBONS

\* T.T.O. = TOTAL TOXIC ORGANICS PER DISTRICT CODE 5 APPENDIX  
 \*\* = pH UNITS  
 AVG = MONTHLY AVERAGE  
 T.I.C.H. = TOTAL IDENTIFIABLE CHLORINATED HYDROCARBONS  
 FS = REFER TO FEDERAL OR STATE REGS. (10CFR 20 OR CCR TITLE 17)



**APPENDIX B**

**DISCHARGE LOCATION**

**APPENDIX B**

MAGNUS PACIFIC LLC

PERMIT# 15018

The sampling location (IWD-001) shall be the contents of the holding tank containing the wastewater generated from the installation of the Permeable Reactive Barrier.

## **APPENDIX C**

# **SIGNIFICANT NONCOMPLIANCE**

## SIGNIFICANT NONCOMPLIANCE

Instances of Significant Noncompliance (SNC) are industrial user violations which meet one or more of the following criteria:

1. Violations of the wastewater discharge limits.
  - a. Chronic violations. Sixty-six percent or more of the measurements which exceed, by any magnitude, the daily maximum limit or the average limit during a 6-month period for the same pollutant parameter.
  - b. Technical Review Criteria (TRC) violations. Thirty-three percent or more of the measurements, for the same pollutant, which exceed the product of the daily maximum limit or the average limit multiplied by the applicable TRC, during a 6-month period.

There are two groups or TRC's:

Group I for conventional pollutants (BOD, TSS, fats, oil and grease)	TRC =	1.4
Group II for all other pollutant, except pH	TRC =	1.2

- c. Any other violation(s) of an effluent limit (average or daily maximum) that the District believes has caused, alone or in combination with other discharges, interference (e.g., slug loads) or pass-through; or endangered the health of the sewage treatment personnel or the public.
    - d. Any discharge of a pollutant that has caused imminent endangerment to human health/welfare or to the environment and has resulted in the District's exercise of its emergency authority to halt or prevent such a discharge.
2. Failure to meet, within 90 days after the compliance date, compliance schedule milestones contained in a permit or enforcement order for starting construction, completing construction, or attaining final compliance.
3. Failure to provide reports for compliance schedules, self-monitoring data, or categorical standards (baseline monitoring reports, 90-day compliance reports, and periodic reports) within 30 days from the due date.
4. Failure to accurately report noncompliance.
5. Any other violation or group of violations that the District considers to be significant.



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**ATTACHMENT J**

Magnetic Test Procedure, ZVI/Sand Batch Logs & Magnetic Separation Test Data

## MAGNETIC SEPARATION TESTING PROCEDURE

### PART 1 – GENERAL

#### 1.01 SUMMARY

- A. This section includes a protocol for magnetic separation testing of granular zero valent iron and sand mixtures. The magnetic separation test allows determination of the weights of granular zero valent iron and sand in the mixture.

#### 1.02 DEFINITIONS

The terms used in this Section are defined as follows:

- A. Permeable Reactive Barrier

A permeable reactive barrier is a permeable reactive substance constructed in the subsurface orthogonal to the groundwater flow direction with the purpose of treating contaminants in groundwater as they pass through the barrier.

- B. Granular ZVI (Granular ZVI)

Granular ZVI is a reactive material that is mixed with sand and placed in the permeable reactive barrier. Granular ZVI chemically degrades certain groundwater contaminants when they contact the granular ZVI.

### PART 2 – MATERIALS

#### 2.01 GRANULAR ZVI AND SAND MIXTURE SAMPLE

- A. A 250 to 1,000 gram sample (0.5 to 2 lbs) of the granular ZVI and sand mixture should be obtained and placed in sample containers.

#### 2.02 SUPPLIES

- A. Sample containers
- B. Balance/scale (battery powered scale if electrical outlet is not available, must be able to measure up to approximately 1,000 grams)

- C. Hot plate, if electrical outlet available (or propane camping stove)
- D. Frying pan (8 in or 10 in)
- E. Large metal spoon
- F. Disposable aluminum cookie sheet
- G. Magnet (heavy duty from hardware store)
- H. Ziplock bags
- I. Sharpie pen(s)
- J. Worksheets/log book

## 2.03 EXECUTION

- A. Weigh the empty containers that the samples will be collected in.
- B. Samples of the iron-sand mixture are collected from the discharge of the mixing device (e.g., shoot of a concrete mixer) and/or from the backfilled material in the excavation. The frequency and location of samples is dependent on the objectives of each project.
- C. Weigh the sample (empty container and sample) and record the weight. Determine the net weight of the sample by subtracting the empty sample container weight. A suitable weighing device (balance or scale) must be used.
- D. Dry the sample. If cemented together during drying, lightly breakup. Weigh and record the net dry weight.
- E. Spread the sample out in a suitable container (e.g., disposable aluminum cookie sheet, etc.).
- F. Cover the magnet in a material (such as a plastic bag) to allow the magnetic material to be easily separated from the magnet.
- G. Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Care must be taken to minimize the trapping of sand particles within the granular ZVI grains. The magnetic fraction is removed from the magnet and placed in a container.
- H. Continue passing the magnet over the material until no more magnetic material is removed. Mixing of the non-magnetic fraction between passes may be required to obtain all the magnetic particles.

- I. The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H should at least three more times to ensure the magnetic and non-magnetic fractions are completely separated. After each separation, the non-magnetic fraction should be added to the non-magnetic fraction from the previous separation.
- J. Weight the magnetic and non-magnetic fractions and record weights. The total net weight of the magnetic and non-magnetic fractions should be the same as the weight prior to separation.
- K. The dry iron net weight percent is determined by:

$$\text{Dry Iron Net Weight Percent} = \frac{\text{Net Weight of Magnetic Material}}{\text{Total Net Weight of Dry Sample}} \times 100$$

- L. Estimated time to complete the magnetic separation test is about 15 to 25 minutes per sample, depending on the moisture of the sample.

END OF SECTION





ZVI Batch Mixing Log

Date 10-13-15 Job No. \_\_\_\_\_ Technician Harris

Batch No.	Time	Truck No.	% Iron by Weight	Pass?	# of Iron Bags Used	# of Sand Bags Used
01		70			12020	7418
02		70			12020	7403
03	4:00 PM	70			12020	7403
04		70			12020	
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Date 10/13/15 Job No. Batch #1 Technician Zach Colburn

A Weight of empty container 370.0 grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 1  
837.3 grams

Bulk weight of sample A - C 467.3 grams

D Net dry weight of sample 467.3 grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 356.8 grams

Weight of sand fraction 109.7 grams

K Dry Iron Net Weight %  $J \div D \times 100\%$  76.35 %

Date 10/13/2015 Job No. Batch #2 Technician Zach Colburn

A Weight of empty container 380.9 grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 881.2 grams

Bulk weight of sample A - C 500.3 grams

D Net dry weight of sample 500.3 grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 306.7 grams

Weight of sand fraction 192.7 grams

K Dry Iron Net Weight % 61.30 %

$306.7 + 192.7 = 499.4$

Date 10/13/2015 Job No. Batch #3 Test 1 Technician Zach Colburn

A Weight of empty container 369.9 grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 880 grams

Bulk weight of sample A - C 510.1 grams

D Net dry weight of sample 510.1 grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 299.9 grams

Weight of sand fraction 209.6 grams

K Dry Iron Net Weight %  $J \div D \times 100\%$  58.2 %

Date 10/13/2015 Job No. *Batch #3 Test 2* Technician

A Weight of empty container 380.9 grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 831.7 grams

Bulk weight of sample A - C 450.8 grams

D Net dry weight of sample 450.8 grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 285.0 grams  $\approx 450$

Weight of sand fraction 165.0 grams

K Dry Iron Net Weight %  $J \div D \times 100\%$  63.2 %

ZVI PRB PROJECT  
 DUBLIN APARTMENTS  
 7544 DUBLIN BLVD, DUBLIN, CA



ZVI Batch Mixing Log

Date 10-14-15 Job No. Technician HARRIS

Batch No.	Time	Truck No.	% Iron by Weight	Pass?	# of Iron Bags Used	# of Sand Bags Used
01					12016	7403
02	8:59				12016	7411
03					12016	7410
04	11:30				12016	7388
05	12:39				12016	7413
06	1:18				12016	7388
07	1:56				12016	7449
08	3:09				12016	7398
09	3:42				12016	7399
10	4:19				12016	7393
11	5:24				12000	7399
12						
13						
14	Mixed 2 1/2 Batches of Guor					
15	2.5 x 6 = 15 Bags Guor					
16	7.5 min. x .77 gal = 5.8 gal Buson					
17	1 1/2 sack soda ash					
18	12500 gallons water					
19						
20						

3085

Date 10-14-2015 Job No. Trench @ 1050 Technician Zach Colburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams *wet*

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-14-2015 Job No. Batch #1 Technician Zech Carlson Truck # 1

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams = 440.6

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$



Date 10-14-2015 Job No. Batch #2 Truck 2 Technician Zach Colburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams 499.7

Weight of sand fraction  grams

K Dry Iron Net Weight %  $J \div D \times 100\%$   %

Date 10/14/2015 Job No. *Batch #2 Truck #2* Technician

A Weight of empty container 381.0 grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 811.9 grams

Bulk weight of sample A - C 430.9 grams

D Net dry weight of sample 430.9 grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 269.7 grams ~~430.6~~

Weight of sand fraction 160.9 grams

K Dry Iron Net Weight % 62.58 %  
 $J \div D \times 100\%$

Date 10-14-2015 Job No. Batch #3 <sup>Truck #1</sup> Test 1 Technician

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10/14/2015 Job No. *Truck 1* *Batch #3 Test 2* Technician

A Weight of empty container 381.1 grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 829 grams

Bulk weight of sample A - C 447.9 grams

D Net dry weight of sample 447.9 grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 274.3 grams

= 447.2

Weight of sand fraction 172.9 grams

K Dry Iron Net Weight % 61.24 %  
 $J \div D \times 100\%$

Date 10-14-15 Job No. Batch #4 Truck 2 Technician Zach Calburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10/14/2015 Job No. *Batch #4 Truck 2 Test 2* Technician *Zach Colburn*

A Weight of empty container 381.0 grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 812.5 grams

Bulk weight of sample A - C 431.5 grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 244.2 grams

Weight of sand fraction 186.4 grams

K Dry Iron Net Weight % 56.5 %  
 $J \div D \times 100\%$

Date 10-14-2015 Job No. Batch 4 <sup>Truck #2</sup> Test # 3 Technician Zach Colburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

K Dry Iron Net Weight %  $J \div D \times 100\%$   %

Date 10-14-2015 Job No. Truck 2  
Batch 4 Test 4 Technician Zach Colburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$



Date 10-14-2015 Job No. Truck #1 Batch # 5 Technician Zach Calburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams = 561.9

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-14-2015 Job No. Truck # 2 Batch # 6 Technician Zach Colburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

540.9

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

10/15/15



ZVI Batch Mixing Log

Date	Harris	Job No.		Technician	Harris
------	--------	---------	--	------------	--------

Batch No.	Time	Truck No.	% Iron by Weight	Pass?	# of Iron Bags Used	# of Sand Bags Used
01	8:27	70			12016	7393
02	9:10				12016	7429
03	10:00				12016	7398
04	10:49				11766	7232
05	12:00				12016	7302
06	1:35				12016	7434
07					12016	7348
08	2:57				12016	7398
09					12016	7398
10					12016	7398
11	4:47				12016	7398
12	5:14				12016	7403
13						
14						
15						
16						
17						
18						
19						
20						

Date 10-15-2015 Job No. In trench 10-85 Technician Zech Colburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 540

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-15-2015 Job No. Batch#1 Truck 1 Technician Zech Colburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 548.3

K Dry Iron Net Weight %  %  
 $J + D \times 100\%$

Date 10-15-2015 Job No. Batch # 2 Truck # 2 Technician

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 599.6

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10/15/2015 Job No. Batch # 3 Truck # 1 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Test #2

Date 10-15-2015 Job No. Batch #3 Truck #1 Technician Zach Colburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 494

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$



Date 11-15-2015 Job No. Batch #4 Truck #2 Technician Zach Colburn

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 622.7

K Dry Iron Net Weight %  %  
 $J + D \times 100\%$

Date 10-15-2015 Job No. Batch #5 Truck 1 Technician Zach Collins

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

K Dry Iron Net Weight %  $J \div D \times 100\%$   %

Date 10-15-2015 Job No. Batch #6 Truck #2 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 421.3

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-15-2015 Job No. Batch # 12 Truck # 2 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 497.4

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$



ZVI Batch Mixing Log

Date 10-16-15 Job No. \_\_\_\_\_ Technician Hanks

Batch No.	Time	Truck No.	% Iron by Weight	Pass?	# of Iron Bags Used	# of Sand Bags Used
01	8:00	1			12016	7403
02	9:30	2			12016	7399
03	11:15	1			12016	7403
04	12:53				12016	7399
05					12016	7394
06					12016	7403
07					12016	7403
08	4:30				12016	7403
09	5:50				12016	7399
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

Date 10/16/15 Job No. Batch #1 Truck #1 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 520.8

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-16-15 Job No. Batch #2 Truck #2 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 429.7g

K Dry Iron Net Weight %  $J \div D \times 100\%$   %

Date 10/16/15 Job No. Batch #3 Truck #1 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 409.2

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$



Date 10-16-15 Job No. Batch # 4 Truck # 2 Technician Trevor Nyckell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 438.4 g

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-16-15 Job No. Batch #5 Truck #1 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-16-15 Job No. <sup>Test #2</sup> Batch #5 Truck #1 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams = 494.4

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-16-15 Job No. Batch # 6 Truck #2 Test #2 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

536.5 g

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-16-15 Job No. Batch #6 Truck #2 Frst #1 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

10:35 AM

Date 10/16/15

Job No. Trench Sample

Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 534.1

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-16-15 Job No. 1425 Trench sample Technician Trevor Newell

A Weight of empty container  grams  
Wet Pan: 562.4  
Wet Net: 775.0

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams  
566.6

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

1555

Date 10-16-15 Job No. Trench Sample Technician Trevor Newell

A Weight of empty container 369.8 grams  
*Wt Pan: 561.7*  
*Wet Net: ~~760.8~~*

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 862.2 grams

Bulk weight of sample A - C 492.4 grams

D Net dry weight of sample 492.4 grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 326.5 grams

Weight of sand fraction 165.4 grams

*= 491.9 Total*

K Dry Iron Net Weight % 66.3 %  
 $J \div D \times 100\%$



Dublin Sat. Oct. 17, 2015

## PRB Back-Fill Batching

Batch No	Time	Iron (lbs)	Sand (lbs)
1		12016	7425
2		12016	7409
3		12016	7404
4		12016	7399
5		12016	7398
6		12016	7429
7		12016	7404
8		12016	7398
9		12016	7398
10		3004	1020

Date 10/17/15 Job No. 1045 In trench sample Technician Trevor Newell

**A** Weight of empty container 381.0 grams Pan wt wet: 559.4

**B** Sample the iron-sand mixture from the discharge of the mixing truck or backfill

**C** Weight of container + sample 946.4 grams

Bulk weight of sample A - C 565.4 grams

**D** Net dry weight of sample 565.4 grams

**E** Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

**F** Cover the magnet in a plastic bag

**G** Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

**H** Continue passing the magnet over the material until no more magnetic material is removed

**I** The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

**J** Weight of iron fraction 410 grams = 565.4

Weight of sand fraction 155.4 grams

**K** Dry Iron Net Weight % 72.5 %  
 $J \div D \times 100\%$

1545

Date 10/17/15 Job No. Trench Sample Technician Trevor Newell

A	Weight of empty container	<input type="text" value="370.1"/>	grams	<i>Pan 559.6 wct net 765.0</i>
B	Sample the iron-sand mixture from the discharge of the mixing truck or backfill			
C	Weight of container + sample	<input type="text" value="977.1"/>	grams	
	Bulk weight of sample A - C	<input type="text" value="607"/>	grams	
D	Net dry weight of sample	<input type="text" value="607"/>	grams	
E	Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)			
F	Cover the magnet in a plastic bag			
G	Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container			
H	Continue passing the magnet over the material until no more magnetic material is removed			
I	The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.			
J	Weight of iron fraction	<input type="text" value="457.7"/>	grams	
	Weight of sand fraction	<input type="text" value="148.9"/>	grams	
K	Dry Iron Net Weight % $J \div D \times 100\%$	<input type="text" value="75.4"/>	%	

Date 10-17-15 Job No. Batch#1 Truck#1 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 506.3 g

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10/17/15 Job No. Batch #2 Truck #1 Technician Trevor Nowell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

= 519.8 g

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10-17-15 Job No. Batch # 3 Truck # Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams = 535.5

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10/17/15 Job No. Batch # 4 Truck #1 Technician Trevor Newell

A Weight of empty container  grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample  grams

Bulk weight of sample A - C  grams

D Net dry weight of sample  grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction  grams

Weight of sand fraction  grams

K Dry Iron Net Weight %  %  
 $J \div D \times 100\%$

Date 10/17/15 Job No. Batch #4 Truck #1 <sup>TEST #2</sup> Technician Trevor Newell

A Weight of empty container 369.4 grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 935.8 grams

Bulk weight of sample A - C 565.9 grams

D Net dry weight of sample 569.9 grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 393.0 grams

Weight of sand fraction 172.4 grams

K Dry Iron Net Weight % 69.4 %  
 $J \div D \times 100\%$



Date 10/17/15 Job No. Batch #5 Truck #2 Technician Trevor Newell

A Weight of empty container 364.8 grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 941.3 grams

Bulk weight of sample A - C 571.5 grams

D Net dry weight of sample 571.5 grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 388.6 grams

Weight of sand fraction 182.2 grams

570.8

K Dry Iron Net Weight % 67.9 %  
 $J + D \times 100\%$

Date 10/17/15 Job No. Batch # 6 Truck #1 Technician Trevor Newell

A Weight of empty container 381.0 grams

B Sample the iron-sand mixture from the discharge of the mixing truck or backfill

C Weight of container + sample 927.5 grams

Bulk weight of sample A - C 546.5 grams

D Net dry weight of sample 546.5 grams

E Spread the sample out in a suitable container (e.g. disposable aluminum cookie sheet)

F Cover the magnet in a plastic bag

G Pass the magnet over the sample to remove the magnetic (granular ZVI) fraction. Place magnetic fraction in new container

H Continue passing the magnet over the material until no more magnetic material is removed

I The magnetic fraction may contain some non-magnetic (sand) particles. Repeat Steps E to H at least 3 more times.

J Weight of iron fraction 384.2 grams

Weight of sand fraction 161.8 grams

= 546.0

K Dry Iron Net Weight %  $J \div D \times 100\%$  70.3 %



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**ATTACHMENT K**

CDF Unconfined Compressive Strength Test Results

**APPLIED MATERIALS & ENGINEERING, INC.**980 41<sup>st</sup> Street  
Oakland, CA 94608Tel: (510) 420-8190  
FAX: (510) 420-8186  
e-mail: info@appmateng.com**COMPRESSION TEST REPORT**

Project Number:	115822C	Report Date:	11/04/15
Project Name:	14-723	Type of Sample:	CLSM Cylinder D4832
	7544 Dublin Boulevard	Size of Sample:	6"x12" Cylinder
	Dublin, CA	Specimens Made By:	Client
Client Name:	Rockridge Geotechnical	Date Sampled:	10/19/15
		Time Sampled:	12:37 PM
		Date Received:	10/27/15

**Field Test Conditions and Results**

Supplier:	Ready Mix Company	Slump, inch:	3	ASTM C143
Mix Number:	..	Air Temperature, °F:	74	
Ticket Number:	..	Mix Temperature, °F:	73	ASTM C1064
Truck Number:	6th load	Air Content, %:	..	ASTM C231
Location in Structure:	Eastern remediation barrier/slurry wall	Fresh Unit Weight, PCF:	..	ASTM C138

**Laboratory Test Results**

Test Schedule Identification	11/04/15 6A	11/16/15 6B	12/14/15 6C			
Diameter, in.	6.00					
Length, in.	12.00					
Width, in.						
Correction Factor	1.00					
Area, in. <sup>2</sup>	28.26					
Ultimate Load, lbs	600					
Ultimate Strength, psi	20					
Average Strength, psi						
Fracture Type						
Age Tested, days	16	28	56			
Specified Strength, psi						

Specimens not scheduled for testing will be discarded after 28 days

**Remarks:**Cc: Logan Medeiros <lmedeiros@rockridgegeo.com>  
Jon Sarmiento <jbsarmiento@rockridgegeo.com>**Reviewed by***Mohammed Faiyaz*Mohammed Faiyaz  
Laboratory Manager



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**ATTACHMENT L**

Construction Photos (submitted separately)



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**ATTACHMENT M**

Performance Warranty



Magnus Pacific, LLC  
6558 Lonetree Blvd  
Rocklin, California 95765  
Phone: 916 462 6400  
[www.magnuspacific.com](http://www.magnuspacific.com)

November 4, 2015

150019-O004

Adam Lambert  
Bay West Development  
2 Henry Adams Street, Suite 450  
San Francisco, CA 94103  
415-509-1441  
[Adam@baywestdevelopment.com](mailto:Adam@baywestdevelopment.com)

Subject:       **Performance Warranty**  
                  **Dublin Apartments – Permeable Reactive Barrier**  
                  **7544 Dublin Blvd, Dublin, CA**

Dear Mr. Lambert:

Magnus Pacific is providing this performance warranty in accordance with Permeable Reactive Barrier Specification 025010, Section 1.9. Magnus Pacific shall warrant that within a 1-year period beginning November 5<sup>th</sup> 2015 and terminating November 4<sup>th</sup> 2016, that there will be no permanent decrease in the hydraulic conductivity due to the construction of the PRB (e.g. excavation methods and biopolymer slurry use) and that there will be no differential settlement.

The person of contact at Magnus Pacific for warranty related issues is:

Matthew Marks  
Vice President/Regional Manager  
Direct: 916-462-6423  
Cell: 916-233-7007



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**ATTACHMENT 2**

Selected Construction Photographs



## ATTACHMENT 2

### SELECTED CONSTRUCTION PHOTOGRAPHS

Dublin Apartments Permeable Reactive Barrier Construction Completion Certification  
Former Crown Chevrolet North Parcel  
7544 Dublin Boulevard  
Dublin, California



Photograph 1 Site preparation and material staging – unloading of sand



Photograph 2 Permeable reactive barrier (PRB) trench excavation



Photograph 3 Biopolymer slurry addition for trench stabilization



Photograph 4 Trench depth quality control measurement



Photograph 5 Preparation of ZVI/sand mixture for placement



Photograph 6 Backfilling of the trench with zero valent iron/sand mixture



Photograph 7 Recirculation and addition of enzyme breaker



Photograph 8 Protective casings for future monitoring well installation



Photograph 9 Backfilling to grade with controlled-density fill (CDF)



Photograph 10 PRB surface conditions following completion of PRB construction