STORMWATER POLLUTION PREVENTION PLAN

for

Mitchell Child Development Center
New Building Addition and Site Work

RISK LEVEL ***1***

Legally Responsible Person [LRP):
Santa Ana Unified School District
1601 East Chestnut Avenue
Santa Ana, CA 92701
Todd Butcher
714-480-5356

Project Address:
3001 W Harvard Street
Santa Ana, CA 92704

SWPPP Prepared by:

RTC, Inc.
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Chris Becker, QSD #24331

SWPPP Preparation Date
May 9, 2017

Estimated Project Dates:

Start of Construction	**May 2017**	Completion of Construction	**June 2018**

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Qualified SWPPP Developer

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name:	Mitchell Child Development Center New Building Addition and Site Work

"This Stormwater Pollution Prevention Plan and Attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Orders No. 2009-009-DWQ as amended by Order 2010-0014-DWQ and Order 2012-0006-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below."

	5/9/2017
QSD Signature	*Date*
Chris Becker	24331
QSD Name	*QSD Certificate Number*
QSD/QSP/CPESC/CESSWI	(949) 456-0823
Title and Affiliation	*Telephone Number*
estimatingrtc@gmail.com	
Email	

Legally Responsible Person

Approval and Certification of the Stormwater Pollution Prevention Plan

Project Name: Mitchell Child Development Center New Building Addition and Site Work

"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, to the best of my knowledge and belief, the information submitted is, 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."

Todd Butcher

Legally Responsible Person

Date

Signature of Legally Responsible Person or Approved Signatory

Telephone Number

Amendment Log

Project Name: Mitchell Child Development Center New Building Addition and Site Work

Amendment No.	Date	Brief Description of Amendment, include section and page number	Prepared and Approved By
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#
			Name: QSD#

Section 1 SWPPP Requirements

1.1 INTRODUCTION

The Mitchell Child Development Center New Building Addition and Site Work project comprises approximately 1.5 acres and is located 3001 W Harvard Street in Santa Ana, California. The property is owned by Santa Ana Unified School District and is being developed by Elite Earthworks & Engineering. The projects location is shown on the Site Map in Appendix B.
This Stormwater Pollution Prevention Plan (SWPPP) is designed to comply with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order No. 2009-0009-DWQ as amended in 2010 and 2012 (NPDES No. CAS000002) issued by the State Water Resources Control Board (State Water Board). This SWPPP has been prepared following the SWPPP Template provided on the California Stormwater Quality Association Stormwater *Best Management Practice Handbook Portal: Construction* (CASQA, 2012). In accordance with the General Permit, Section XIV, this SWPPP is designed to address the following:

- Pollutants and their sources, including sources of sediment associated with construction, construction site erosion and other activities associated with construction activity are controlled;
- Where not otherwise required to be under a Regional Water Quality Control Board (Regional Water Board) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- Site BMPs are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard;

Calculations and design details as well as BMP controls for are complete and correct, Appendix A.

1.2 PERMIT REGISTRATION DOCUMENTS

Required Permit Registration Documents (PRDs) shall be submitted to the State Water Board via the Stormwater Multi Application and Report Tracking System (SMARTS) by the Legally Responsible Person (LRP), or authorized personnel (i.e., Approved Signatory) under the direction of the LRP. The project-specific PRDs include:

1. Notice of Intent (NOI);
2. Risk Assessment (Construction Site Sediment and Receiving Water Risk Determination);
3. Site Map;
4. Annual Fee;
5. Signed Certification Statement (LRP Certification is provided electronically with SMARTS PRD submittal); and
6. SWPPP.

Site Maps can be found in Appendix B. A copy of the submitted PRDs shall also be kept in Appendix C along with the Waste Discharge Identification (WDID) confirmation.

1.3 SWPPP AVAILABILITY AND IMPLEMENTATION

The discharger shall make the SWPPP available at the construction site during working hours (see Section 7.5 of CSMP for working hours) while construction is occurring and shall be made available upon request by a State or Municipal inspector. When the original SWPPP is retained by a crewmember in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left with the field crew and the original SWPPP shall be made available via a request by radio/telephone. (CGP Section XIV.C)

The SWPPP shall be implemented concurrently with the start of ground disturbing activities.

1.4 SWPPP AMENDMENTS

The SWPPP should be revised when:

- If there is a General Permit violation.
- When there is a reduction or increase in total disturbed acreage (General Permit Section II Part C).
- BMPs do not meet the objectives of reducing or eliminating pollutants in stormwater discharges.

Additionally, the SWPPP shall be amended when:

- There is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- When there is a change in the project duration that changes the project's risk level; or
- When deemed necessary by the QSD. The QSD has determined that the changes listed in Table 1.1 can be field determined by the QSP. All other changes shall be made by the QSD as formal amendments to the SWPPP.

The following items shall be included in each amendment:

- Who requested the amendment;
- The location of proposed change;
- The reason for change;
- The original BMP proposed, if any; and
- The new BMP proposed.

Amendment shall be logged at the front of the SWPPP and certification kept in Appendix D. The SWPPP text shall be revised replaced, and/or hand annotated as necessary to properly convey the amendment. SWPPP amendments must be made by a QSD. The following changes have been designated by the QSD as "to be field determined" and constitute minor changes that the QSP may implement based on field conditions.

Table 1.1 List of Changes to be Field Determined

Candidate changes for field location or determination by QSP[(1)]	Check changes that can be field located or field determined by QSP
Increase quantity of an Erosion or Sediment Control Measure	*X*
Relocate/Add stockpiles or stored materials	*X*
Relocate or add toilets	*X*
Relocate vehicle storage and/or fueling locations	*X*
Relocate areas for waste storage	*X*
Relocate water storage and/or water transfer location	*X*
Changes to access points (entrance/exits)	*X*
Change type of Erosion or Sediment Control Measure	
Changes to location of erosion or sediment control	
Minor changes to schedule or phases	*X*
Changes in construction materials	*X*
(1) Any field changes not identified for field location or field determination by QSP must be approved by QSD	

1.5 RETENTION OF RECORDS

Paper or electronic records of documents required by this SWPPP shall be retained for a minimum of three years from the date generated or date submitted, whichever is later, for the following items:

- SWPPP Binder with all Inspection form
- All versions of the SWPPP maps
- All regulatory communications or letters

These records shall be available at the Site until construction is complete. Records assisting in the determination of compliance with the General Permit shall be made available within a reasonable time, to the Regional Water Board, State Water Board or U.S. Environmental Protection Agency (EPA) upon request. Requests by the Regional Water Board for retention of records for a period longer than three years shall be adhered to.

1.6 REQUIRED NON-COMPLIANCE REPORTING

If a General Permit discharge violation occurs the QSP shall immediately notify the LRP. The LRP shall include information on the violation with the Annual Report. Corrective measures will be implemented immediately following identification of the discharge or written notice of non-compliance from the Regional Water Board. Discharges and corrective actions must be documented and include the following items:

- The date, time, location, nature of operation and type of unauthorized discharge.
- The cause or nature of the notice or order.
- The control measures (BMPs) deployed before the discharge event, or prior to receiving notice or order.
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence.

1.7 ANNUAL REPORT

The General Permit requires that permittees prepare, certify, and electronically submit an Annual Report no later than September 1st of each year. Reporting requirements are identified in Section XVI of the General Permit. Annual reports will be filed in SMARTS and in accordance with information required by the on-line forms.

1.8 CHANGES TO PERMIT COVERAGE

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when: a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought. The SWPPP shall be modified appropriately, shall be logged at the front of the SWPPP and cetrification of SWPPP amendments are to be kept in Appendix D. Updated PRDs submitted electronically via SMARTS can be found in Appendix E.

1.9 NOTICE OF TERMINATION

A Notice of Termination (NOT) must be submitted electronically by the LRP via SMARTS to terminate coverage under the General Permit. The NOT must include a final Site Map and representative photographs of the project site that demonstrate final stabilization has been achieved. The NOT shall be submitted within 90 days of completion of construction. The Regional Water Board will consider a construction site complete when the conditions of the General Permit, Section II.D have been met.

Section 2 Project Information

2.1 PROJECT AND SITE DESCRIPTION

2.1.1 Site Description

The Mitchell Child Development Center New Classroom Addition and Site Work project site comprises approximately 1.5 Acres and is located at 3001 W Harvard Street, in Santa Ana, California. The project site is located approximately 2.5 miles north of Interstate 405 Freeway. The project site is directly adjacent to concrete drainage channel that discharges directly into San Ana River approximately .5 miles form site. The project is located at LAT: 33.72050 and – LONG: 117.90968 and is identified on the Site Map in Appendix B.

2.1.2 Existing Conditions

As of the initial date of this SWPPP, the project site is an existing school campus with buildings, playgrounds and parking lots. There are no known historic sources of contamination at the site.

2.1.3 Existing Drainage

The project site is relatively level but does slope slightly to the southeast corner of the campus. The elevation of the project site ranges from 48 to 53 feet above mean sea level (msl). Surface drainage at the site currently flows to the Southeast towards existing surface streets. Stormwater is conveyed through surface runoff. Stormwater discharges, from the site, are not considered direct discharges, as defined by the State Water Board Santa Ana River. Existing site topography, drainage patterns, and stormwater conveyance systems are shown on WPCD in Appendix B

The project discharges to Santa Ana River that is not listed for water quality impairment on the most recent 303(d)-list.

2.1.4 Geology and Groundwater

The site is underlain by undocumented fills soils consisting of silty clays with sand, clayey sands, and silty sands with clay with AC pieces at a depth of 1.5 to 2.5 feet deep. Refer to Geotechnical Report completed by Associated Soils Engineering, Inc. dated August 6, 2010. Groundwater occurs beneath the site at approximately 13 feet below ground surface. The groundwater gradient is toward southeast direction.

2.1.5 Project Description

Project grading will occur on approximately 1.5 acre of the project, which comprises approximately 32 percent of the total area. The limits of grading are shown on in Appendix B. Grading will include cut activities, with the total graded material estimated to be 150 cubic yards. Approximately 300 cubic yards of fill material will be exported during grading activities. Graded materials are expected to be hauled away. Soil will be stockpiled as shown on in Appendix B. Construction activities will be phased.

2.1.6 Developed Condition

Post construction surface drainage will be directed to the southeast as surface flow through sheet flow towards the existing curb and gutter system and eventually will discharge to concrete drainage channel that will discharge to Santa Ana River.

Post construction drainage patterns and conveyance systems are presented in Appendix B.

Table 2.1 Construction Site Estimates

Construction site area	2	acres
Percent impervious before construction	95	%
Runoff coefficient before construction	0.41125	cfs
Percent impervious after construction	95	%
Runoff coefficient after construction	0.41125	cfs

2.2 PERMITS AND GOVERNING DOCUMENTS

In addition to the General Permit, the following documents have been taken into account while preparing this SWPPP

- Regional Water Board requirements
- Basin Plan requirements
- Contract Documents
- Air Quality Regulations and Permits
- Federal Endangered Species Act
- National Historic Preservation Act/Requirements of the State Historic Preservation Office
- State of California Endangered Species Act
- Clean Water Act Section 401 Water Quality Certifications and 404 Permits
- CA Department of Fish and Game 1600 Streambed Alteration Agreement

2.3 STORMWATER RUN-ON FROM OFFSITE AREAS

There is no anticipated offsite run-on to this construction site because of stormwater conveyance system to prevent on-site flow.

2.4 FINDINGS OF THE CONSTRUCTION SITE SEDIMENT AND RECEIVING WATER RISK DETERMINATION

A construction site risk assessment has been performed for the project and the resultant risk level is Risk Level 1.

The risk level was determined through the use of the K, LS provided in SMARTS. The risk level is based on project duration, location, proximity to impaired receiving waters and soil conditions. A copy of the Risk Level determination submitted on SMARTS with the PRDs is included in Appendix C.

Table 2.2 and Table 2.3 summarize the sediment and receiving water risk factors and document the sources of information used to derive the factors.

Table 2.2 Summary of Sediment Risk

RUSLE Factor	**Value**	**Method for establishing value**
R	37.45	EPA Erosivity Worksheet
K	.32	Google Earth add in from SWRCB
LS	.65	Google Earth add in from SWRCB
Total Predicted Sediment Loss (tons/acre)		**7.7896**
Overall Sediment Risk Low Sediment Risk < 15 tons/ acre Medium Sediment Risk >= 15 and < 75 tons/acre High Sediment Risk >= 75 tons/acre		☒ **Low** ☐ **Medium** ☐ **High**

Runoff from the project site discharges into curb and gutter street system that eventually discharge into concrete Greenville Banning Channel that discharge eventually into Santa Ana River.

Table 2.3 Summary of Receiving Water Risk

Receiving Water Name	**303(d) Listed for Sediment Related Pollutant(1)**	**TMDL for Sediment Related Pollutant(1)**	**Beneficial Uses of COLD, SPAWN, and MIGRATORY(1)**
Santa Ana River	☐ Yes ☒ No	☐ Yes ☒ No	☐ Yes ☒ No
Overall Receiving Water Risk			☒ **Low** ☐ **High**
(1) If yes is selected for any option the Receiving Water Risk is High			

Risk Level 1 sites are subject to the narrative effluent limitations specified in the General Permit. The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls, structures, and best management practices. This SWPPP has been prepared to address Risk Level 1 requirements (General Permit Attachment C).

2.5 CONSTRUCTION SCHEDULE

The site sediment risk was determined based on construction taking place between July 29, 2014 and May 30, 2015 Modification or extension of the schedule (start and end dates) may affect risk determination and permit requirements. The LRP shall contact the QSD if the schedule changes during construction to address potential impact to the SWPPP. The estimated schedule for planned work can be found in Appendix F.

2.6 POTENTIAL CONSTRUCTION ACTIVITY AND POLLUTANT SOURCES

Appendix G includes a list of construction activities and associated materials that are anticipated to be used onsite. These activities and associated materials will or could potentially contribute pollutants, other than sediment, to stormwater runoff.

The anticipated activities and associated pollutants were used in Section 3 to select the Best Management Practices for the project. Location of anticipated pollutants and associated BMPs are show on the Site Map in Appendix B.

For sampling requirements for non-visible pollutants associated with construction activity please refer to Section 7.7.1. For a full and complete list of onsite pollutants, refer to the Material Safety Data Sheets (MSDS), which are retained onsite at the construction trailer.

2.7 IDENTIFICATION OF NON-STORMWATER DISCHARGES

Non-stormwater discharges consist of discharges which do not originate from precipitation events. The General Permit provides allowances for specified non-stormwater discharges that do not cause erosion or carry other pollutants.

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited.

Non-stormwater discharges that are authorized from this project site include the following:

- fire hydrant flushing,
- irrigation of vegetative erosion control measures,
- pipe flushing and testing,
- water to control dust,
- uncontaminated groundwater dewatering

These authorized non-stormwater discharges will be managed with the stormwater and non-stormwater BMPs described in Section 3 of this SWPPP and will be minimized by the QSP.

Activities at this site that may result in unauthorized non-stormwater discharges include:

- Vehicle and equipment cleaning, fueling and maintenance operations;
- Vehicle and equipment wash water, including concrete washout water;
- Slurries from concrete cutting and coring operations, PCC grinding or AC grinding operations;
- Slurries from concrete or mortar mixing operations;
- Slurries from drilling or boring operations;

- Blast residue from high-pressure washing of structures or surfaces;
- Wash water from cleaning painting equipment;
- McMaster-Carr Office Expansion 13 May 26, 2014
- Runoff from dust control applications of water or dust palliatives;
- Sanitary and septic wastes;
- Chemical leaks and/or spills of any kind including but not limited to petroleum, paints, cure compounds, etc.

Steps will be taken, including the implementation of appropriate BMPs, to ensure that unauthorized discharges are eliminated, controlled, disposed, or treated on-site.

Discharges of construction materials and wastes, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or stormwater runoff, are also prohibited.

2.8 REQUIRED SITE MAP INFORMATION

The construction project's Site Map(s) showing the project location, surface water boundaries, geographic features, construction site perimeter and general topography and other requirements identified in Attachment B of the General Permit is located in Appendix B. Table 2.5 identifies Map or Sheet Nos. where required elements are illustrated.

Table 2.5 Required Map Information

Included on Map/Plan Sheet No. (1)	Required Element
Satellite Aerial Map	The project's surrounding area (vicinity)
WPCP	Site layout
WPCP	Construction site boundaries
WPCP	Drainage areas
WPCP	Discharge locations
WPCP	Sampling locations
Grading Plan	Areas of soil disturbance (temporary or permanent)
Gradign Plan	Active areas of soil disturbance (cut or fill)
WPCP	Locations of runoff BMPs
WPCP	Locations of erosion control BMPs
WPCP	Locations of sediment control BMPs
NA	ATS location (if applicable)
Satellite Aerial Map	Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
Utility Plan	Locations of all post construction BMPs

Table 2.5 Required Map Information

Included on Map/Plan Sheet No. (1)	Required Element
WPCP	Waste storage areas
WPCP	Vehicle storage areas
WPCP	Material storage areas
WPCP	Entrance and Exits
WPCP	Fueling Locations

Notes: (1) Indicate maps or drawings that information is included on (e.g., Vicinity Map, Site Map, Drainage Plans, Grading Plans, Progress Maps, etc.)

Section 3 Best Management Practices

3.1 SCHEDULE FOR BMP IMPLEMENTATION

Table 3.1 BMP Implementation Schedule

	BMP	Implementation	Duration
Erosion Control	EC-1, Scheduling	Prior to Construction	Entirety of Project
	EC-2, Preservation of Existing Vegetation	Start of Construction	Entirety of Project
	EC-16, Non-Vegetated Stabilization	During Construction for inactive stockpiles and utility trenching	Entirety of Project
Sediment Control	SE-1, Silt Fence	Prior to earth disturbing activities in that area	Entirety of Project
	SE-6, Gravel Bag Berm	Prior to earth disturbing activities in that area	Entirety of Project
	SE-7, Street Sweeping	As needed throughout duration of construction	Entirety of Project
Tracking Control	TC-1, Stabilized Construction Entrance	Prior to start of Construction	Entirety of Project
Wind Erosion	WE-1, Wind Erosion Control	As needed throughout duration of construction	Entirety of Project

3.2 EROSION AND SEDIMENT CONTROL

Erosion and sediment controls are required by the General Permit to provide effective reduction or elimination of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges from the Site. Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control.

3.2.1 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles.

This construction project will implement the following practices to provide effective temporary and final erosion control during construction:

1. Preserve existing vegetation where required and when feasible.

2. The area of soil disturbing operations shall be controlled such that the Contractor is able to implement erosion control BMPs quickly and effectively.
3. Stabilize non-active areas within 14 days of cessation of construction activities or sooner if stipulated by local requirements.
4. Control erosion in concentrated flow paths by applying erosion control blankets, check dams, erosion control seeding or alternate methods.
5. Prior to the completion of construction, apply permanent erosion control to remaining disturbed soil areas.

Sufficient erosion control materials shall be maintained onsite to allow implementation in conformance with this SWPPP.

The following temporary erosion control BMP selection table indicates the BMPs that shall be implemented to control erosion on the construction site. Fact Sheets for temporary erosion control BMPs are provided in Appendix H.

Table 3.2 Temporary Erosion Control BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP Used		If not used, state reason
			YES	NO	
EC-1	Scheduling	✓	**X**		
EC-2	Preservation of Existing Vegetation	✓	X		
EC-3	Hydraulic Mulch	✓[2]		X	Not needed
EC-4	Hydroseed	✓[2]		X	Not needed
EC-5	Soil Binders	✓[2]		X	Not needed
EC-6	Straw Mulch	✓[2]		X	Not needed
EC-7	Geotextiles and Mats	✓[2]		X	EC-16 used
EC-8	Wood Mulching	✓[2]		X	Not needed
EC-9	Earth Dike and Drainage Swales	✓[3]		X	Not needed
EC-10	Velocity Dissipation Devices			X	Not needed
EC-11	Slope Drains			X	No Slopes onsite
EC-12	Stream Bank Stabilization			X	No streams onsite
EC-14	Compost Blankets	✓[2]		X	Not needed
EC-15	Soil Preparation-Roughening			X	Not needed
EC-16	Non-Vegetated Stabilization	✓[2]	X		
WE-1	Wind Erosion Control	✓	X		
Alternate BMPs Used:					**If used, state reason:**

[1] Applicability to a specific project shall be determined by the QSD.
[2] The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements.
[3] Run-on from offsite shall be directed away from all disturbed areas, diversion of offsite flows may require design/analysis by a licensed civil engineer and/or additional environmental permitting

These temporary erosion control BMPs shall be implemented in conformance with the following guidelines and as outlined in the BMP Factsheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Scheduling

The following is the schedule for BMP implementation; BMPs must be implemented, modified, and maintained to reflect the phase of construction and the weather conditions. In order to be effective, some BMPs must be installed before the site is disturbed (e.g., to provide protection during grading operations or to reduce or minimize pollution from historic areas of contamination during construction).

Before grading or ground disturbance begins, construction entrances per CASQA TC-1 Standards; and perimeter protection consisting of SE-6 Gravel Bag Berm on site will be utilized. As new BMPs are installed depending on construction activities or additional BMPs implemented due to rain events, they will be updated on the Water Pollution Control Drawing, and any new BMPs deployed will be described in the following sections. All of the following BMP detail sheets can be found in Appendix H.

Preservation of Existing Vegetation

Existing vegetation will be preserved along areas surrounding the site, and within areas where construction activity will not occur.

Non-Vegetated Stabilization

Plastic covers, geotextile fabrics or bonded fiber matrix will be utilized to cover utility trenches and inactive disturbed soil areas.

Wind Erosion Control

BMP WE-1, Wind Erosion Control, and BMP NS-1, Water Conservation Practices, will be implemented to provide dust control and prevent discharges from dust control activities and water supply equipment. Water application rates will be minimized as necessary to prevent runoff and ponding. Water equipment leaks will be repaired immediately. During Windy Conditions (forecast or actual winds of approx. 25 mph or greater), dust control will be applied to disturbed areas, including haul roads, to adequately control wind erosion. BMP WM-3, Stockpile Management, using silt fences and plastic covers will be implemented to prevent wind dispersal of sediment from stockpiles.

3.2.2 Sediment Controls

Sediment controls are temporary or permanent structural measures that are intended to complement the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water.

The following sediment control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Fact Sheets for temporary sediment control BMPs are provided in Appendix H.

Table 3.3 Temporary Sediment Control BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP used		If not used, state reason
			YES	NO	
SE-1	Silt Fence	✓[2] [3]	**X**		
SE-2	Sediment Basin			X	Not needed
SE-3	Sediment Trap			X	Not needed
SE-4	Check Dams			X	Not needed
SE-5	Fiber Rolls	✓[2][3]		X	Gravel Bag berm used
SE-6	Gravel Bag Berm	✓[3]	X		
SE-7	Street Sweeping	✓	X		
SE-8	Sandbag Barrier			X	Gravel bag berm used
SE-9	Straw Bale Barrier			X	Gravel bag berm used
SE-10	Storm Drain Inlet Protection	✓ RL2&3		X	No storm drains onsite or in vicinity
SE-11	ATS			X	Not needed
SE-12	Manufactured Linear Sediment Controls			X	Gravel Bag berm used
SE-13	Compost Sock and Berm	✓[3]		X	Gravel Bag berm used
SE-14	Biofilter Bags	✓[3]		X	Not needed
TC-1	Stabilized Construction Entrance and Exit	✓	X		
TC-2	Stabilized Construction Roadway			X	Not needed
TC-3	Entrance Outlet Tire Wash			X	Not needed
Alternate BMPs Used:					**If used, state reason:**

[1] Applicability to a specific project shall be determined by the QSD
[2] The QSD shall ensure implementation of one of the minimum measures listed or a combination thereof to achieve and maintain the Risk Level requirements
[3]Risk Level 2 &3 shall provide linear sediment control along toe of slope, face of slope, and at the grade breaks of exposed slope

These temporary sediment control BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Silt Fence

Silt fence will be used to protect possible stormwater discharge into adjacent channel.

Gravel Bag Berm

Gravel Bag Berms are to be used along the perimeter of the site, along the slopes where runoff can sheet flow onto or off the sites and around temporary stockpiles.

Street Sweeping

Street sweeping and vacuuming will occur during soil hauling and as necessary to keep street surfaces clear of soil and debris. Washing of sediment tracked onto streets into storm drains shall not occur.

Storm Drain Inlet Protection

Storm drain inlet protection will need to be utilized around significant drains. Storm drain inlet protection may be comprised of filter fabric, gravel bag berms, compost/silt socks, and/or geotextile storm drain inserts.

3.3 NON-STORMWATER CONTROLS AND WASTE AND MATERIALS MANAGEMENT

3.3.1 Non-Stormwater Controls

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit, are prohibited. Non-stormwater discharges for which a separate NPDES permit is required by the local Regional Water Board are prohibited unless coverage under the separate NPDES permit has been obtained for the discharge. The selection of non-stormwater BMPs is based on the list of construction activities with a potential for non-stormwater discharges identified in Section 2.7 of this SWPPP.

The following non-stormwater control BMP selection table indicates the BMPs that shall be implemented to control sediment on the construction site. Fact Sheets for temporary non-stormwater control BMPs are provided in Appendix H.

Table 3.4 Temporary Non-Stormwater BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP used		If not used, state reason
			YES	NO	
NS-1	Water Conservation Practices	✓	X		
NS-2	Dewatering Operation			X	No dewatering needed
NS-3	Paving and Grinding Operation		X		
NS-4	Temporary Stream Crossing			X	No streams onsite
NS-5	Clear Water Diversion			X	No water bodies onsite
NS-6	Illicit Connection/Discharge	✓	X		
NS-7	Potable Water/Irrigation			X	Not needed
NS-8	Vehicle and Equipment Cleaning	✓	X		
NS-9	Vehicle and Equipment Fueling	✓	X		
NS-10	Vehicle and Equipment Maintenance	✓	X		
NS-11	Pile Driving Operation			X	Not needed
NS-12	Concrete Curing		X		
NS-13	Concrete Finishing		X		
NS-14	Material and Equipment Use Over Water			X	No water bodies onsite
NS-15	Demolition Removal Adjacent to Water			X	No water bodies onsite
NS-16	Temporary Batch Plants			X	No batch plants onsite
Alternate BMPs Used:			**If used, state reason:**		

[1] Applicability to a specific project shall be determined by the QSD

Non-stormwater BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Water Conservation Practices

Water conservation practices shall be implemented for all construction activities that use water.

Paving and Grinding Operation

The project will include placement of AC pavement. BMP NS-3, Paving and Grinding Operations, will be implemented to prevent paving materials from being discharged off-site. Covers will be placed over each inlet adjacent to paving operations. Following paving operations, the area will be swept, inlet covers removed, and the inlets will be inspected for paving materials.

Illicit Connection- Illegal Discharge Connection

The contractor will implement BMP NS-6, Illicit Connection/Illegal Discharge Detection throughout the duration of the project

Potable Water Irrigation Discharge Detection

Potable Water/Irrigation consists of practices and procedures to manage the discharge of potential pollutants generated during discharges from irrigation water lines, landscape irrigation, lawn or garden watering, planned and unplanned discharges from potable water sources, water line flushing, and hydrant flushing.

Inspect irrigated areas within the construction limits for excess watering. Inspect irrigated areas for signs of erosion and/or discharge. Adjust watering times and schedules to ensure that the appropriate amount of water is being used and to minimize runoff. Repair broken lines immediately.

Vehicle and Equipment Cleaning

The contractor will implement BMP NS-8, Vehicle and Equipment cleaning throughout the duration of the project.

Vehicle and Equipment Fueling & Maintenance

Several types of vehicles and equipment will be used onsite throughout the project, including loaders, trucks and trailers, backhoes, forklifts, generators, and compressors. Vehicle and equipment fueling and maintenance will be utilized to prevent discharge of fuel and other vehicle fluids. Vehicle maintenance and mobile fueling operations will be conducted at least 50 feet away from an operational inlet and drainage facility and on a level graded area.

Concrete Curing & Finishing

Concrete Curing is used in the construction of structures such as bridges, retaining walls, slabs, and foundations. Concrete Finishing methods are used for bridge deck rehabilitation, paint removal, curing compound removal, and final surface finish appearances. Methods include san blasting, shot blasting and grinding. Proper procedures and care should be taken when managing concrete curing and finishing materials to prevent them from coming into contact with stormwater flows, which could result in a high pH discharge.

3.3.2 Materials Management and Waste Management

Materials management control practices consist of implementing procedural and structural BMPs for handling, storing and using construction materials to prevent the release of those materials into stormwater discharges. The amount and type of construction materials to be utilized at the Site will depend upon the type of construction and the length of the construction period. The materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as soil binders for temporary stabilization.

Waste management consist of implementing procedural and structural BMPs for handling, storing and ensuring proper disposal of wastes to prevent the release of those wastes into stormwater discharges.

Materials and waste management pollution control BMPs shall be implemented to minimize stormwater contact with construction materials, wastes and service areas; and to prevent materials and wastes from being discharged off-site. The primary mechanisms for stormwater contact that shall be addressed include:

- Direct contact with precipitation
- Contact with stormwater run-on and runoff
- Wind dispersion of loose materials
- Direct discharge to the storm drain system through spills or dumping
- Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

A list of construction activities is provided in Section 2.6. The following Materials and Waste Management BMP selection table indicates the BMPs that shall be implemented to handle materials and control construction site wastes associated with these construction activities. Fact Sheets for Materials and Waste Management BMPs are provided in Appendix H.

Table 3.5 Temporary Materials Management BMPs

CASQA Fact Sheet	BMP Name	Meets a Minimum Requirement[1]	BMP used		If not used, state reason
			YES	NO	
WM-01	Material Delivery and Storage	✓	X		
WM-02	Material Use	✓	X		
WM-03	Stockpile Management	✓	X		
WM-04	Spill Prevention and Control	✓	X		
WM-05	Solid Waste Management	✓	X		
WM-06	Hazardous Waste Management	✓	X		
WM-07	Contaminated Soil Management				No contaminated soil onsite
WM-08	Concrete Waste Management	✓	X		
WM-09	Sanitary-Septic Waste Management	✓	X		
WM-10	Liquid Waste Management				Not needed
Alternate BMPs Used:				**If used, state reason:**	

[1] Applicability to a specific project shall be determined by the QSD.

Material management BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix H. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP or guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the Site Map. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Material Delivery and Storage

In general, Material Delivery and Storage and Material Use BMPs will be implemented to help prevent discharges of construction materials during delivery, storage, and use. The general material storage area will be located in the designated area shown on the WPCD. Two types of storage/containment facilities will be provided within the storage area to minimize storm water contact with construction materials:

- A watertight shipping container will be used to store hand tools, small parts, and most construction materials that can be carried by hand, such as paint cans, solvents, and grease.
- A separate containment facility will be constructed adjacent to the shipping containers to provide storage for larger items such as drums and items shipped or stored on pallets.

Very large items such as light standards, framing materials, and stockpiled lumber will be stored in the open in the general storage area. Such materials will be elevated with wood blocks to minimized contact with run-on and soil.

Aggregate and base materials will also be stockpiled in the general storage area and will be surrounded with additional sediment controls (i.e., gravel bag barrier). Plastic covers (Geotextiles, plastic covers, tarps, erosion control blankets/mats) will be provided if necessary for wind/dust control or before rain.

Spill Prevention and Control

Spill Prevention and Control BMPs will be implemented to contain and clean up spills and prevent material discharges to the storm drain system. Cleanup of spills should be immediate, automatic, and routine. A trained staff member or a licensed cleaning company should perform the cleanup. This discussion contains general advice for spill prevention and control.

Minor Spills

Minor spills are those that are likely to be controlled by on-site personnel.

After contacting local emergency response agencies, the following actions should occur upon discovery of a minor spill:

- Contain the spread of the spill.
- If the spill occurs on paved or impermeable surfaces, clean up using dry methods (i.e., absorbent material, cat litter, and/or rags).

- If the spill occurs in dirt areas, immediately contain the spill by constructing an earthen dike. Dig up and properly dispose of contaminated soil.

- If the spill occurs during rain, cover the affected area to avoid runoff.

- Record all steps taken to report and contain the spill.

Major Spills

On-site personnel should not attempt to control major spills until the appropriate and qualified emergency response staff has arrived at the site.

Notify the State Office of Emergency Services (OES) at 800-852-7550 when a hazardous spill occurs. For spills of federal reportable quantities, you must also notify the National Response Center at 800-424-8802. A written report should be sent to all notified authorities. Failure to report major spills can result in significant fines and penalties.

Solid Waste Management

Solid Waste Management and Hazardous Waste Management BMPs will be implemented to minimize storm water contact with waste materials and prevent waste discharge. Solid wastes will be loaded directly into trucks for off-site disposal. When on-site storage is necessary, solid wastes will be stored in watertight dumpsters in the general storage area of the designated area. Dumpster locations are shown on the WPCD. Rubble will be stockpiled in the general storage area and will be surrounded with sediment controls (gravel bag barrier). All Trash bins and/or dumpsters shall either have lids or be covered at the end of each work day.

Hazardous Waste Management

The management of hazardous waste is governed by regulations found in CCR Title 22 Section 66260 et. seq. Hazardous wastes will be stored in the shipping containers or covered containment area discussed above for materials storage. Hazardous wastes will be appropriate and clearly marked containers and segregated from other non-waste materials.

Questions regarding the disposal of hazardous waste and hazardous waste haulers should be directed to:

City of Santa Ana
Orange County Environmental Health
1241 East Dyer Road, Suite 120
Santa Ana, CA 92705
714-433-6000

The contractor will implement Hazardous Waste Management BMPs to prevent or reduce the discharge of pollutants to storm water from hazardous waste through proper material use, waste disposal, and training of employees and subcontractors.

Hazardous waste management practices are implemented on construction projects that generate waste from the use of:

- petroleum products – asphalt products
- concrete curing compounds – pesticides
- palliatives – acids
- septic wastes
- paints
- stains
- solvents
- wood preservatives
- roofing tar
- any material deemed a hazardous waste in CCR Title 22, Division 4.5, or listed in 40 CFR. Parts 110, 117, 261 or 302

The following steps will help reduce storm water pollution from hazardous wastes:

- Wastes will be stored in sealed containers constructed of a suitable material and will be labeled as required by California Code of Regulations (CCR) Title 22, Division 4.5, and 49 Code of Federal Regulations (CFR), Parts 172, 173, 178, and 179.

- All hazardous waste will be stored, transported, and disposed of as required in CCR Title 22, Division 4.5, and 49 CFR 261-263.

- The temporary containment facility should provide for a spill containment volume equal to 1.5 times the volume of all containers able to contain precipitation from a 25-year storm event, plus the greater of 10 percent of the aggregate volume of all containers or 100 percent of the capacity of the largest tank within its boundary, whichever is greater.

- The temporary containment facility should be impervious to the materials stored there for a minimum contact time of 72 hours.

- Temporary containment facilities should be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills should be placed into drums after each rainfall. These liquids should be handled as a hazardous waste unless testing determines them to be non-hazardous. Non-hazardous liquids should be sent to an approved disposal site.

- Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.

- Throughout the rainy season, temporary containment facilities should be covered during non-working days, and prior to rain events. Covered facilities may include use of plastic tarps for small facilities or constructed roofs with overhangs.

- Drums should not be overfilled and wastes should not be mixed.

- Unless watertight, containers of dry waste should be stored on pallets.

- Do not clean out brushes or rinse paint containers into the dirt, street, gutter, storm drain or stream. "Paint out" brushes as much as possible. Rinse water-based paints to the sanitary sewer. Filter and reuse thinners and solvents. Dispose of excess oil-based paints and sludge as hazardous waste.

- Ensure that an adequate volume of hazardous waste storage is available.

- Ensure that hazardous waste collection containers are conveniently located.

- Designate onsite hazardous waste storage areas away from storm drains or watercourses and away from moving vehicles and equipment to prevent accidental spills.

- Minimize production or generation of hazardous materials and hazardous waste on the job site.

- Use containment berms in fueling and maintenance areas and where the potential for spills is high.

- Segregate potentially hazardous waste from non-hazardous construction site debris.

- Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.

- Educate employees and subcontractors on hazardous waste identification, storage, and disposal procedures.

- Place a stockpile of spill cleanup materials where it will be readily accessible.

Concrete Waste Management

Concrete and cement related mortars are toxic to fish and the aquatic environment above an 8.5 pH. They require proper handling and disposal to minimize or eliminate discharges to gutters, storm drains, and watercourses. Discharges will consist of rinse water and residual concrete (Portland cement, aggregates, admixture, and water). Estimated pour dates are shown on the project schedule in **Attachment J**. Concrete pours will not be conducted during or immediately prior to rainfall events.

Concrete Waste Management BMPs will be implemented at the project site, per the methods outlined in the *CASQA BMP Manual*, WM-08. All excess concrete and concrete washout slurries will be discharged to the washout facility for drying. Dried-off concrete will be used as fill material, if feasible.

3.4 POST CONSTRUCTION STORMWATER MANAGEMENT MEASURES

Post construction BMPs are permanent measures installed during construction, designed to reduce or eliminate pollutant discharges from the site after construction is completed.

This site is located in an area subject to a Phase I or Phase II Municipal Separate Storm Sewer System (MS4) permit approved Stormwater Management Plan. ☒ Yes ☐ No

Post construction runoff reduction requirements have been satisfied through the MS4 program, this project is exempt from provision XIII A of the General Permit.

Section 4 BMP Inspection and Maintenance

4.1 BMP INSPECTION AND MAINTENANCE

The General Permit requires routine weekly inspections of BMPs, along with inspections before, during, and after qualifying rain events. A BMP inspection checklist must be filled out for inspections and maintained on-site with the SWPPP. The inspection checklist includes the necessary information covered in Section 7.6. A blank inspection checklist can be found in Appendix I. Completed checklists shall be kept in CSMP Attachment 2 "Monitoring Records.

BMPs shall be maintained regularly to ensure proper and effective functionality. If necessary, corrective actions shall be implemented within 72 hours of identified deficiencies and associated amendments to the SWPPP shall be prepared by the QSD.

Specific details for maintenance, inspection, and repair of Construction Site BMPs can be found in the BMP Factsheets in Appendix H.

4.2 RAIN EVENT ACTION PLANS

Rain Event Action Plans (REAPs) are not required for Risk Level 1 projects.

Section 5 Training

Appendix L identifies the QSPs for the project. To promote stormwater management awareness specific for this project, periodic training of job-site personnel shall be included as part of routine project meetings (e.g. daily/weekly tailgate safety meetings), or task specific trainings as needed.

The QSP shall be responsible for providing this information at the meetings, and subsequently completing the training logs shown in Appendix K, which identifies the site-specific stormwater topics covered as well as the names of site personnel who attended the meeting. Tasks may be delegated to trained employees by the QSP provided adequate supervision and oversight is provided. Training shall correspond to the specific task delegated including: SWPPP implementation; BMP inspection and maintenance; and record keeping.

Documentation of training activities (formal and informal) is retained in SWPPP Appendix K.

Section 6 Responsible Parties and Operators

6.1 RESPONSIBLE PARTIES

Approved Signatory(ies) who are responsible for SWPPP implementation and have authority to sign permit-related documents are listed below. Written authorizations from the LRP for these individuals are provided in Appendix L. The Approved Signatory(ies) assigned to this project are:

Name	Title	Phone Number

QSPs identified for the project are identified in Appendix L. The QSP shall have primary responsibility and significant authority for the implementation, maintenance and inspection/monitoring of SWPPP requirements. The QSP will be available at all times throughout the duration of the project. Duties of the QSP include but are not limited to:

- Implementing all elements of the General Permit and SWPPP, including but not limited to:
  - Ensuring all BMPs are implemented, inspected, and properly maintained;
  - Performing non-stormwater and stormwater visual observations and inspections;
  - Performing non-stormwater and storm sampling and analysis, as required;
  - Performing routine inspections and observations;
  - Implementing non-stormwater management, and materials and waste management activities such as: monitoring discharges; general Site clean-up; vehicle and equipment cleaning, fueling and maintenance; spill control; ensuring that no materials other than stormwater are discharged in quantities which will have an adverse effect on receiving waters or storm drain systems; etc.;
- The QSP may delegate these inspections and activities to an appropriately trained employee, but shall ensure adequacy and adequate deployment.
- Ensuring elimination of unauthorized discharges.
- The QSPs shall be assigned authority by the LRP to mobilize crews in order to make immediate repairs to the control measures.
- Coordinate with the Contractor(s) to assure all of the necessary corrections/repairs are made immediately and that the project complies with the SWPPP, the General Permit and approved plans at all times.
- Notifying the LRP or Authorized Signatory immediately of off-site discharges or other non-compliance events.

6.2 CONTRACTOR LIST

Contractor

Name:	**Robert Adams**
Title:	**Project Manager**
Company:	**PA Hagopian Contractor**
Address:	**778 W. Town and Country Road** **Orange, CA 92868**
Phone Number:	
Number (24/7):	**714-543-4185**

Section 7 Construction Site Monitoring Program

7.1 Purpose

This Construction Site Monitoring Program was developed to address the following objectives:

1. To demonstrate that the site is in compliance with the Discharge Prohibitions of the Construction General Permit;
2. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
3. To determine whether immediate corrective actions, additional Best Management Practices (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges;
4. To determine whether BMPs included in the SWPPP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges.

7.2 Applicability of Permit Requirements

This project has been determined to be a Risk Level 1 project. The General Permit identifies the following types of monitoring as being applicable for a Risk Level 1 project.

Risk Level 1

- Visual inspections of Best Management Practices (BMPs);
- Visual monitoring of the site related to qualifying storm events;
- Visual monitoring of the site for non-stormwater discharges;
- Sampling and analysis of construction site runoff for non-visible pollutants when applicable; and
- Sampling and analysis of construction site runoff as required by the Regional Water Board when applicable.

7.3. Weather and Rain Event Tracking

Visual monitoring and inspections requirements of the General Permit are triggered by a qualifying rain event. The General Permit defines a qualifying rain event as any event that produces ½ inch of precipitation. A minimum of 48 hours of dry weather will be used to distinguish between separate qualifying storm events.

7.3.1 Weather Tracking

The QSP should daily consult the National Oceanographic and Atmospheric Administration (NOAA) for the weather forecasts. These forecasts can be obtained at http://www.srh.noaa.gov/. Weather reports should be printed and maintained with the SWPPP in CSMP Attachment 1 "Weather Reports".

7.3.2 Rain Gauges

The QSP shall install at least one rain gauge on the project site. Locate the gauge in an open area away from obstructions such as trees or overhangs. Mount the gauge on a post at a height of 3 to 5 feet with the gauge extending several inches beyond the post. Make sure that the top of the gauge is level. Make sure the post is not in an area where rainwater can indirectly splash from sheds, equipment, trailers, etc.

The rain gauge(s) shall be read daily during normal site scheduled hours. The rain gauge should be read at approximately the same time every day and the date and time of each reading recorded. Log rain gauge readings in CSMP Attachment 1 "Weather Records". Follow the rain gauge instructions to obtain accurate measurements.

Once the rain gauge reading has been recorded, accumulated rain shall be emptied and the gauge reset.

For comparison with the site rain gauge, the nearest appropriate governmental rain gauge(s) is located at: Santa Ana Fire (SDSTA), Lat: 33.743°N Lon: 117.868°W Elev: 110ft.

http://forecast.weather.gov/MapClick.php?CityName=Santa+Ana&state=CA&site=SGX&lat=33.7199&lon=-117.903#.VB8G7ZV0yUk

7.4 Monitoring Locations

Monitoring locations are shown on the Site Maps in Appendix B. Monitoring locations are described in the Sections 7.6 and 7.7.

Whenever changes in the construction site might affect the appropriateness of sampling locations, the sampling locations shall be revised accordingly. All such revisions shall be implemented as soon as feasible and the SWPPP amended. Temporary changes that result in a one-time additional sampling location do not require a SWPPP amendment.

7.5 Safety and Monitoring Exemptions

Safety practices for sample collection will be in accordance with the site specific Health and Safety Plan.

This project is not required to collect samples or conduct visual observations (inspections) under the following conditions:

- During dangerous weather conditions such as flooding and electrical storms.
- Outside of scheduled site business hours.

Scheduled site business hours are: 7am-5pm Monday through Friday.

If monitoring (visual monitoring or sample collection) of the site is unsafe because of the dangerous conditions noted above then the QSP shall document the conditions for why an exception to performing the monitoring was necessary. The exemption documentation shall be filed in CSMP Attachment 2 "Monitoring Records".

7.6 Visual Monitoring

Visual monitoring includes observations and inspections. Inspections of BMPs are required to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Visual observations of the site are required to observe storm water drainage areas to identify any spills, leaks, or uncontrolled pollutant sources.

Table 7.1 identifies the required frequency of visual observations and inspections. Inspections and observations will be conducted at the locations identified in Section 7.6.3.

Table 7.1 Summary of Visual Monitoring and Inspections

Type of Inspection	Frequency
Routine Inspections	
BMP Inspections	Weekly[1]
BMP Inspections – Tracking Control	Daily
Non-Stormwater Discharge Observations	Quarterly during daylight hours
Rain Event Triggered Inspections	
Site Inspections Prior to a Qualifying Event	Within 48 hours of a qualifying event [2]
BMP Inspections During an Extended Storm Event	Every 24-hour period of a rain event[3]
Site Inspections Following a Qualifying Event	Within 48 hours of a qualifying event[2]

[1] Most BMPs must be inspected weekly; those identified below must be inspected more frequently.

[2] Inspections are required during scheduled site operating hours.

[3] Inspections are required during scheduled site operating hours regardless of the amount of precipitation on any given day.

7.6.1 Routine Observations and Inspections

Routine site inspections and visual monitoring are necessary to ensure that the project is in compliance with the requirements of the Construction General Permit.

7.6.1.1 Routine BMP Inspections

Inspections of BMPs are conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

7.6.1.2 Non-Stormwater Discharge Observations

Each drainage area will be inspected for the presence of or indications of prior unauthorized and authorized non-stormwater discharges. Inspections will record:

- Presence or evidence of any non-stormwater discharge (authorized or unauthorized);
- Pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc.); and
- Source of discharge.

7.6.2 Rain-Event Triggered Observations and Inspections

Visual observations of the site and inspections of BMPs are required prior to a qualifying rain event; following a qualifying rain event, and every 24-hour period during a qualifying rain event. Pre-rain inspections will be conducted after consulting NOAA and determining that a precipitation event with a 50% or greater probability of precipitation has been predicted.

7.6.2.1 Visual Observations Prior to a Forecasted Qualifying Rain Event

Within 48-hours prior to a qualifying event a stormwater visual monitoring site inspection will include observations of the following locations:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly implemented;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

Consistent with guidance from the State Water Resources Control Board, pre-rain BMP inspections and visual monitoring will be triggered by a NOAA forecast that indicates a probability of precipitation of 50% or more in the project area.

7.6.2.2 BMP Inspections During an Extended Storm Event

During an extended rain event BMP inspections will be conducted to identify and record:

- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

If the construction site is not accessible during the rain event, the visual inspections shall be performed at all relevant outfalls, discharge points, downstream locations. The inspections should record any projected maintenance activities.

7.6.2.3 Visual Observations Following a Qualifying Rain Event

Within 48 hours following a qualifying rain event (0.5 inches of rain) a stormwater visual monitoring site inspection is required to observe:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- BMPs to identify if they have been properly designed, implemented, and effective;
- Need for additional BMPs;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard; and
- Discharge of stored or contained rain water.

7.6.3 Visual Monitoring Procedures

Visual monitoring shall be conducted by the QSP or staff trained by and under the supervision of the QSP.

The name(s) and contact number(s) of the site visual monitoring personnel are listed below and their training qualifications are provided in Appendix K.

Assigned inspector: **Chris Becker** Contact phone: **(949) 456-0823**

Alternate inspector: **Oscar Flores** Contact phone: **(949) 456-0823**

Stormwater observations shall be documented on the *Visual Inspection Field Log Sheet* (see CSMP Attachment 3 "Example Forms"). BMP inspections shall be documented on the site specific BMP inspection checklist. Any photographs used to document observations will be referenced on stormwater site inspection report and maintained with the Monitoring Records in Attachment 2.

The QSP shall within one day of the inspection submit copies of the completed inspection report to Jason Marquardt.

The completed reports will be kept in CSMP Attachment 2 "Monitoring Records".

7.6.4 Visual Monitoring Follow-Up and Reporting

Correction of deficiencies identified by the observations or inspections, including required repairs or maintenance of BMPs, shall be initiated and completed as soon as possible.

If identified deficiencies require design changes, including additional BMPs, the implementation of changes will be initiated within 72 hours of identification and be completed as soon as possible. When design changes to BMPs are required, the SWPPP shall be amended to reflect the changes.

Deficiencies identified in site inspection reports and correction of deficiencies will be tracked on the *Inspection Field Log Sheet* or *BMP Inspection Report* and shall be submitted to the QSP and shall be kept in CSMP Attachment 2 "Monitoring Records".

The QSP shall within one day of the inspection submit copies of the completed *Inspection Field Log Sheet* or *BMP Inspection Report* with the corrective actions to Jason Marquardt.

Results of visual monitoring must be summarized and reported in the Annual Report.

7.6.5 Visual Monitoring Locations

The inspections and observations identified in Sections 7.6.1 and 7.6.2 will be conducted at the locations identified in this section.

BMP locations are shown on the Site Maps in SWPPP Appendix A.

There are one drainage area(s) on the project site and the contractor's yard, staging areas, and storage areas. Drainage area(s) are shown on the Site Maps in Appendix B and Table 7.2 identifies each drainage area by location.

Table 7.2 Site Drainage Areas

Location No.	Location
1	Campus site

There are zero stormwater storage or containment area(s) are on the project site.

There are two discharge location(s) on the project site. Site stormwater discharge location(s) are shown on the Site Maps in Appendix B.

7.7 Water Quality Sampling and Analysis

7.7.1 Sampling and Analysis Plan for Non-Visible Pollutants in Stormwater Runoff Discharges

This Sampling and Analysis Plan for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in stormwater runoff discharges from the project site.

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

The following construction materials, wastes, or activities, as identified in Section 2.6, are potential sources of non-visible pollutants to stormwater discharges from the project. Storage, use, and operational locations are shown on the Site Maps in Appendix B.

- Adhesives
- Asphalt work
- Cleaning
- Concrete / Masonry work
- Drywall
- Framing / Carpentry
- Grading / earthwork
- Heating, ventilation, air conditioning
- Insulation
- Landscaping
- Painting
- Planting/Vegetation Management
- Plumbing
- Removal of existing structure
- Roofing
- Sanitary Waste
- Soil preparation / Amendments / Dust Control
- Solid waste (leakage)
- Utility line testing and flushing
- Vehicle and equipment use

The following existing site features, as identified in Section 2.6, are potential sources of non-visible pollutants to stormwater discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the Site Maps in Appendix B.

- Asphalt Work
- Removal of existing structures
- Grading / earthwork
- Soil preparation / amendments / dust control

The following soil amendments have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil and will be used on the project site. Locations of soil amendment application are shown on the Site Maps in Appendix B.

- None

7.7.1.1 Sampling Schedule

Samples for the potential non-visible pollutant(s) and a sufficiently large unaffected background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during the site's scheduled hours and shall be collected regardless of the time of year and phase of the construction.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during site inspections conducted prior to or during a rain event.

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents stormwater contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- A construction activity, including but not limited to those in Section 2.6, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

- Stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

7.7.1.2 Sampling Locations

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, and personnel safety. Planned non-visible pollutant sampling locations are shown on the Site Maps in Appendix B and include the locations identified in Table 7.5 through 7.10.

One sampling location(s) on the project site and the contractor's yard have been identified for the collection of samples of runoff from planned material and waste storage areas and areas where non-visible pollutant producing construction activities are planned.

Table 7.6 Non-Visible Pollutant Sample Locations – Contractors' Yard

Sample Location Number	Sample Location Description	Sample Location Latitude and Longitude (Decimal Degrees)
		To be field verified

One sampling location(s) has been identified for the collection of an uncontaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants. This location(s) was selected such that the sample will not have come in contact with the operations, activities, or areas identified in Section 7.7.1 or with disturbed soils areas.

Table 7.9 Non-Visible Pollutant Sample Locations – Background (Unaffected Sample)

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
		To be field verified

7.7.1.3 Monitoring Preparation

Non-visible pollutant samples will be collected by:

Contractor	☐ Yes	☐ No
Consultant	☒ Yes	☐ No
Laboratory	☐ Yes	☐ No

Samples on the project site will be collected by the following Consultant:

Company Name: RTC, Inc.

Street Address:	22431 Antonio Pkwy., B 160-251
City, State Zip:	Rancho Santa Margarita, CA 92688
Telephone Number:	(949) 456-0823
Point of Contact:	Chris Becker, QSD #24331
Name of Sampler(s):	Chris Becker
Name of Alternate(s):	Oscar Flores

The QSP or his/her designee will ensure that adequate sample collection personnel and supplies for monitoring non-visible pollutants are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

7.7.1.4 Analytical Constituents

Table 7.11 lists the specific sources and types of potential non-visible pollutants on the project site and the water quality indicator constituent(s) for that pollutant.

Table 7.11 Potential Non-Visible Pollutants and Water Quality Indicator Constituents

General Work Activity/Potential Pollutants	Water Quality Indicators of Potential Constituents (Review product literature and Material Safety Data Sheets to confirm potential constituents)
Adhesives	COD, Phenols, SVOCs
Asphalt Work	VOCs
Cleaning	
Acids	pH
Bleaches	Residual chlorine
TSP	Phosphate
Solvents	VOCs, SVOCs
Detergents	MBAS
Concrete / Masonry Work	
Sealant (Methyl methacrylate)	SVOC
Curing compounds	VOCs, SVOCs, pH
Ash, slag, sand	pH, Al, Ca, Va, Zn
Drywall	Cu, Al, General Minerals
Framing / Carpentry	
Treated Wood	Cu, Cr, As, Zn
Particle board	Formaldehyde
Untreated wood	BOD

General Work Activity/Potential Pollutants	Water Quality Indicators of Potential Constituents (Review product literature and Material Safety Data Sheets to confirm potential constituents)
Grading / Earthworks	
Gypsum / Lime amendments	pH
Contaminated Soil	Constituents specific to known contaminants, check with Laboratory
Heating, Ventilation, Air Conditioning	Freon
Insulation	Al, Zn
Landscaping	
Pesticides/Herbicides	Product dependent, see label and check with Laboratory
Fertilizers	TKN, NO_3, BOD, COD, DOC, Sulfate, NH_3, Phosphate, Potassium
Aluminum sulfate	Al, TDS, Sulfate
Liquid Waste	Constituents specific to materials, check with Laboratory
Painting	
Resins	COD, SVOCs
Thinners	COD, VOCs
Paint strippers	VOCs, SVOCs, metals
Lacquers, varnishes, enamels	COD, VOCs, SVOCs
Sealants	COD
Adhesives	Phenols, SVOCs
Planting / Vegetation Management	
Vegetation stockpiles	BOD
Fertilizers	TKN, NO_3, BOD, COD, DOC, sulfate, NH_3, Phosphate, Potassium
Pesticides/Herbicides	Product dependent, see label and check with Laboratory
Plumbing	
Solder, flux, pipe fitting	Cu, Pb, Sn, Zn
Pools and Fountains	Residual chlorine, Cu, chloramines
Removal of existing structures	Zn, VOCs, PCBs (see also other applicable activity categories, e.g., grading, painting)
Roofing	Cu, Pb, VOCs

General Work Activity/Potential Pollutants	Water Quality Indicators of Potential Constituents (Review product literature and Material Safety Data Sheets to confirm potential constituents)
Sanitary Waste Sewer line breaks and Portable Toilets (using clear fluid – blue fluid is visible if discharged)	BOD, Total/Fecal coliform
Soil Preparation / Amendments/Dust Control	
Polymer/Co-polymers	TKN, NO_3, BOD, COD, DOC, Sulfate, Ni
Lignin sulfate	TDS, alkalinity
Psyllium	COD, TOC
Guar/Plant Gums	COD, TOC, Ni
Solid Waste (leakage)	BOD
Utility Line Testing and Flushing	Residual chlorine, chloramines
Vehicle and Equipment Use	
Batteries	Sulfuric acid; Pb, pH

7.7.1.5 Sample Collection

Samples of discharge shall be collected at the designated non-visible pollutant sampling locations shown on the Site Maps in Appendix B or in the locations determined by observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples shall be collected and preserved in accordance with the methods identified in the Table, "Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants" provided in Section 7.7.1.6. Only the QSP, or personnel trained in water quality sampling under the direction of the QSP shall collect samples.

Sample collection and handling requirements are described in Section 7.7.7.

7.7.1.6 Sample Analysis

Samples shall be analyzed using the analytical methods identified in the Table 7.12.

Samples will be analyzed by:

Laboratory Name:	Truesdail Laboratories, Inc.
Street Address:	14201 Franklin Avenue
City, State Zip:	Tustin, CA 92780
Telephone Number:	(714) 730-6239

ELAP Certification Number:	1237

Table 7.12 Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants

Constituent	Analytical Method	Minimum Sample Volume	Sample Containers	Sample Preservation	Reporting Limit	Maximum Holding Time
VOCs – Solvents	EPA Method 601/602	3 x 40 mL	VOA – glass	Store at 4˚C, HCl to pH<2	1 µg/L	14 days
SVOCs	EPA Method 625	1 x 1 L	Glass – amber	Store at 4˚C	10 µg/L	7 days
Pesticides/PCBs	EPA Method 8081A/8082	1 x 1 L	Glass – amber	Store at 4˚C	0.1 µg/L	7 days
Herbicides	EPA Method 8151A	1 x 1 L	Glass – amber	Store at 4˚C	Check laboratory	7 days
BOD	EPA Method 405.1	1 x 500 mL	Polypropylene	Store at 4˚C	1 mg/L	48 hours
COD	EPA Method 410.4	1 x 250 mL	Glass – amber	Store at 4˚C, H_2SO_4 to pH<2	5 mg/L	28 days
DO	SM 4500-O G	1 x 250 mL	Glass – amber	Store at 4˚C	Check laboratory	8 hours
pH	EPA 150.1	1 x 100 mL	Polypropylene	None	unitless	Immediate
Alkalinity	SM 2320B	1 x 250 mL	Polypropylene	Store at 4˚C	1 mg/L	14 days
Metals (Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, Se, Na, Th, Va, Zn)	EPA 200.8/1631	1 x 250 mL	Polypropylene	Store at 4˚C, HNO_3 to pH<2	0.1 mg/L	6 months

Table 7.12 Sample Collection, Preservation and Analysis for Monitoring Non-Visible Pollutants

Constituent	Analytical Method	Minimum Sample Volume	Sample Containers	Sample Preservation	Reporting Limit	Maximum Holding Time
Metals (Chromium VI)	EPA 7196	1 x 500 mL	Polypropylene	Store at 4˚C	1 µg/L	24 hours

Notes:

°C = degrees Celsius
BOD = biochemical oxygen demand
COD = chemical oxygen demand
DO = dissolved oxygen
EPA = Environmental Protection Agency
HCl = hydrogen chloride
H_2SO_4 = hydrogen sulfide
HNO_3 = nitric acid
L = liter
mg/L = milligrams per liter
µg/L = micrograms per Liter
mL = milliliter
PCBs = polychlorinated biphenyls
SVOCs = Semi-Volatile Organic Compounds
SM = Standard Method
TPH = total petroleum hydrocarbons
TRPH = total recoverable petroleum hydrocarbons
VOA = volatile organic analysis
VOC = Volatile organic compound

* Sampling for this analyte is not required unless a specific pollutant discharge occurs that requires analysis, or if required by jurisdiction.

7.7.1.7 Data Evaluation and Reporting

The QSP shall complete an evaluation of the water quality sample analytical results.

Runoff/downgradient results shall be compared with the associated upgradient/unaffected results and any associated run-on results. Should the runoff/downgradient sample show an increased level of the tested analyte relative to the unaffected background sample, which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

The General Permit prohibits the storm water discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the Regional Water Board and other agencies as required by 40 C.F.R. §§ 117.3 and 302.4.

Results of non-visible pollutant monitoring shall be reported in the Annual Report.

7.7.2 Sampling and Analysis Plan for pH and Turbidity in Stormwater Runoff Discharges

Sampling and analysis of runoff for pH and turbidity is not required for Risk Level 1 projects.

7.7.3 Additional Monitoring Following an NEL Exceedance

This project is not subject to NELs.

7.7.4 Sampling and Analysis Plan for Non-Stormwater Discharges

This project is not subject to the non-stormwater sampling and analysis requirements of the General Permit because it is a Risk Level 1 project.

7.5 Sampling and Analysis Plan for Other Pollutants Required by the Regional Water Board

The Regional Water Board has not specified monitoring for additional pollutants.

7.7.6 Training of Sampling Personnel

Sampling personnel shall be trained to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring program (SWAMP) 2008 Quality Assurance Program Plan (QAPrP). Training records of designated contractor sampling personnel are provided in Appendix K.

The stormwater sampler(s) and alternate(s) have received the following stormwater sampling training:

Name	Training
Chris Becker	CESSWI, CPESC, CPSWQ, QSD/P

The stormwater sampler(s) and alternates have the following stormwater sampling experience:

Name	Experience
Chris Becker	CESSWI, CPESC, CPSWQ, QSD/P

7.7.7 Sample Collection and Handling

7.7.7.1 Sample Collection

Samples shall be collected at the designated sampling locations shown on the Site Maps and listed in the preceding sections. Samples shall be collected, maintained and shipped in accordance with the SWAMP 2008 Quality Assurance Program Plan (QAPrP).

Grab samples shall be collected and preserved in accordance with the methods identified in preceding sections.

To maintain sample integrity and prevent cross-contamination, sample collection personnel shall follow the protocols below.

- Collect samples (for laboratory analysis) only in analytical laboratory-provided sample containers;
- Wear clean, powder-free nitrile gloves when collecting samples;
- Change gloves whenever something not known to be clean has been touched;
- Change gloves between sites;
- Decontaminate all equipment (e.g. bucket, tubing) prior to sample collection using a trisodium phosphate water wash, distilled water rinse, and final rinse with distilled water. (Dispose of wash and rinse water appropriately, i.e., do not discharge to storm drain or receiving water). Do not decontaminate laboratory provided sample containers;
- Do not smoke during sampling events;
- Never sample near a running vehicle;
- Do not park vehicles in the immediate sample collection area (even non-running vehicles);
- Do not eat or drink during sample collection; and
- Do not breathe, sneeze, or cough in the direction of an open sample container.

The most important aspect of grab sampling is to collect a sample that represents the entire runoff stream. Typically, samples are collected by dipping the collection container in the runoff flow paths and streams as noted below.

i. For small streams and flow paths, simply dip the bottle facing upstream until full.
ii. For larger stream that can be safely accessed, collect a sample in the middle of the flow stream by directly dipping the mouth of the bottle. Once again making sure that the opening of the bottle is facing upstream as to avoid any contamination by the sampler.
iii. For larger streams that cannot be safely waded, pole-samplers may be needed to safely access the representative flow.
iv. Avoid collecting samples from ponded, sluggish or stagnant water.
v. Avoid collecting samples directly downstream from a bridge as the samples can be affected by the bridge structure or runoff from the road surface.

Note, that depending upon the specific analytical test, some containers may contain preservatives. These containers should **never** be dipped into the stream, but filled indirectly from the collection container.

7.7.7.2 Sample Handling

Turbidity and pH measurements must be conducted immediately. Do not store turbidity or pH samples for later measurement.

Samples for laboratory analysis must be handled as follows. Immediately following sample collection:

- Cap sample containers;
- Complete sample container labels;
- Sealed containers in a re-sealable storage bag;
- Place sample containers into an ice-chilled cooler;
- Document sample information on the *Effluent Sampling Field Log Sheet*; and
- Complete the CoC.

All samples for laboratory analysis must be maintained between 0-6 degrees Celsius during delivery to the laboratory. Samples must be kept on ice, or refrigerated, from sample collection through delivery to the laboratory. Place samples to be shipped inside coolers with ice. Make sure the sample bottles are well packaged to prevent breakage and secure cooler lids with packaging tape.

Ship samples that will be laboratory analyzed to the analytical laboratory right away. Hold times are measured from the time the sample is collected to the time the sample is analyzed. The General Permit requires that samples be received by the analytical laboratory within 48 hours of the physical sampling (unless required sooner by the analytical laboratory).

Laboratory Name:	Truesdail Laboratories, Inc.
Street Address:	14201 Franklin Avenue
City, State Zip:	Tustin, CA 92780
Telephone Number:	(714) 730-6239
ELAP Certification Number:	1237

7.7.7.3 Sample Documentation Procedures

All original data documented on sample bottle identification labels, *Effluent Sampling Field Log Sheet*, and CoCs shall be recorded using waterproof ink. These shall be considered accountable documents. If an error is made on an accountable document, the individual shall make corrections by lining through the error and entering the correct information. The erroneous information shall not be obliterated. All corrections shall be initialed and dated.

Duplicate samples shall be identified consistent with the numbering system for other samples to prevent the laboratory from identifying duplicate samples. Duplicate samples shall be identified in the Effluent Sampling Field Log Sheet.

Sample documentation procedures include the following:

Sample Bottle Identification Labels: Sampling personnel shall attach an identification label to each sample bottle. Sample identification shall uniquely identify each sample location.

Field Log Sheets: Sampling personnel shall complete the *Effluent Sampling Field Log Sheet* and *Receiving Water Sampling Field Log Sheet* for each sampling event, as appropriate.

Chain of Custody: Sampling personnel shall complete the CoC for each sampling event for which samples are collected for laboratory analysis. The sampler will sign the CoC when the sample(s) is turned over to the testing laboratory or courier.

7.8 Active Treatment System Monitoring

An Active Treatment System (ATS) will be deployed on the site?

☐ Yes ☒ No

This project does not require a project specific Sampling and Analysis Plan for an ATS because deployment of an ATS is not planned.

7.9 Bioassessment Monitoring

This project is not subject to bioassessment monitoring because it is not a Risk Level 3 project.

7.10 Watershed Monitoring Option

This project is not participating in a watershed monitoring option.

7.11 Quality Assurance and Quality Control

An effective Quality Assurance and Quality Control (QA/QC) plan shall be implemented as part of the CSMP to ensure that analytical data can be used with confidence. QA/QC procedures to be initiated include the following:

- Field logs;
- Clean sampling techniques;
- CoCs;
- QA/QC Samples; and
- Data verification.

Each of these procedures is discussed in more detail in the following sections.

7.11.1 Field Logs

The purpose of field logs is to record sampling information and field observations during monitoring that may explain any uncharacteristic analytical results. Sampling information to be included in the field log include the date and time of water quality sample collection, sampling personnel, sample container identification numbers, and types of samples that were collected. Field observations should be noted in the field log for any abnormalities at the sampling location (color, odor, BMPs, etc.). Field measurements for pH and turbidity should also be recorded in the field log. A Visual Inspection Field Log, an Effluent Sampling Field Log Sheet, included in CSMP Attachment 3 “Example Forms”.

7.11.2 Clean Sampling Techniques

Clean sampling techniques involve the use of certified clean containers for sample collection and clean powder-free nitrile gloves during sample collection and handling. As discussed in Section 7.7.7, adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

7.11.3 Chain of Custody

The sample CoC is an important documentation step that tracks samples from collection through analysis to ensure the validity of the sample. Sample CoC procedures include the following:

- Proper labeling of samples;
- Use of CoC forms for all samples; and
- Prompt sample delivery to the analytical laboratory.

Analytical laboratories usually provide CoC forms to be filled out for sample containers. An example CoC is included in CSMP Attachment 3 "Example Forms".

7.11.4 QA/QC Samples

QA/QC samples provide an indication of the accuracy and precision of the sample collection; sample handling; field measurements; and analytical laboratory methods. The following types of QA/QC will be conducted for this project:

☒ Field Duplicates at a frequency of 1 duplicate minimum per sampling event
(Required for all sampling plans with field measurements or laboratory analysis)

7.11.4.1 Field Duplicates

Field duplicates provide verification of laboratory or field analysis and sample collection. Duplicate samples shall be collected, handled, and analyzed using the same protocols as primary samples. The sample location where field duplicates are collected shall be randomly selected from the discharge locations. Duplicate samples shall be collected immediately after the primary sample has been collected. Duplicate samples must be collected in the same manner and as close in time as possible to the original sample. Duplicate samples shall not influence any evaluations or conclusion.

7.11.5 Data Verification

After results are received from the analytical laboratory, the QSP shall verify the data to ensure that it is complete, accurate, and the appropriate QA/QC requirements were met. Data must be verified as soon as the data reports are received. Data verification shall include:

- Check the CoC and laboratory reports.
  Make sure all requested analyses were performed and all samples are accounted for in the reports.
- Check laboratory reports to make sure hold times were met and that the reporting levels meet or are lower than the reporting levels agreed to in the contract.
- Check data for outlier values and follow up with the laboratory.
  Occasionally typographical errors, unit reporting errors, or incomplete results are reported and should be easily detected. These errors need to be identified, clarified, and

corrected quickly by the laboratory. The QSP should especially note data that is an order of magnitude or more different than similar locations, or is inconsistent with previous data from the same location.

- Check laboratory QA/QC results.
  EPA establishes QA/QC checks and acceptable criteria for laboratory analyses. These data are typically reported along with the sample results. The QSP shall evaluate the reported QA/QC data to check for contamination (method, field, and equipment blanks), precision (laboratory matrix spike duplicates), and accuracy (matrix spikes and laboratory control samples). When QA/QC checks are outside acceptable ranges, the laboratory must flag the data, and usually provides an explanation of the potential impact to the sample results.
- Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate.
  Sample re-analysis should only be undertaken when it appears that some part of the QA/QC resulted in a value out of the accepted range. Sample results may not be discounted unless the analytical laboratory identifies the required QA/QC criteria were not met and confirms this in writing.

Field data including inspections and observations must be verified as soon as the field logs are received, typically at the end of the sampling event. Field data verification shall include:

- Check field logs to make sure all required measurements were completed and appropriately documented;
- Check reported values that appear out of the typical range or inconsistent; Follow-up immediately to identify potential reporting or equipment problems, if appropriate, recalibrate equipment after sampling;
- Verify equipment calibrations;
- Review observations noted on the field logs; and
- Review notations of any errors and actions taken to correct the equipment or recording errors.

7.12 Records Retention

All records of stormwater monitoring information and copies of reports (including Annual Reports) must be retained for a period of at least three years from date of submittal or longer if required by the Regional Water Board.

Results of visual monitoring, field measurements, and laboratory analyses must be kept in the SWPPP along with CoCs, and other documentation related to the monitoring.

Records are to be kept onsite while construction is ongoing. Records to be retained include:

- The date, place, and time of inspections, sampling, visual observations, and/or measurements, including precipitation;
- The individual(s) who performed the inspections, sampling, visual observation, and/or field measurements;
- The date and approximate time of field measurements and laboratory analyses;
- The individual(s) who performed the laboratory analyses;

- A summary of all analytical results, the method detection limits and reporting limits, and the analytical techniques or methods used;
- Rain gauge readings from site inspections;
- QA/QC records and results;
- Calibration records;
- Visual observation and sample collection exemption records;
- The records of any corrective actions and follow-up activities that resulted from analytical results, visual observations, or inspections;

CSMP Attachment 1: Weather Reports

CSMP Attachment 2: Monitoring Records

CSMP Attachment 3: Example Forms

Rain Gauge Log Sheet				
Construction Site Name:				
WDID #:				
Date (mm/dd/yy)	Time (24-hr)	Initials	Rainfall Depth (Inches)	Notes:

QUARTERLY INSPECTION FORM

Conduct one visual inspection quarterly in each of the following periods January-March, April-June, July-September, and October-December.

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
0 0 0 0 0	0
	PROJECT IDENTIFIER NUMBER
	0
	WDID NUMBER
	0
CONTRACTOR NAME AND ADDRESS	PROJECT RISK LEVEL
0 0 0	☐ Risk Level 1 ☐ Risk Level 2 ☐ Risk Level 3
Submitted by contractor (print and sign name)	Date
Water pollution control manager name and company name	Phone Number
	Emergency (24/7) phone number
Inspector's Name	Date of Inspection
0	

Weather Conditions
- ☐ Clear
- ☐ Partly Cloudy
- ☐ Cloudy

Precipitation Condition
- ☐ Misty
- ☐ Light Rain
- ☐ Rain
- ☐ Heavy Rain
- ☐ Hail
- ☐ Snow

Wind Condition
- ☐ None
- ☐ Less than 5 mph
- ☐ Greater than 5

Construction Phase
- ☐ Highway construction
- ☐ Plant established
- ☐ Suspension of work (inactive site)

Site Information
- ____ Acres total project area
- ____ Acres total project disturbed soil area
- ____ Acres current phase disturbed soil area
- ____ Acres current phase inactive disturbed soil

Time elapsed since last storm ____ days

Precipitation amount from last storm ____ inches

Drainage Areas	Presence of a non-stormwater discharge?		Indication of a prior non-stormwater discharge?		Date discharge was observed	Photos?	Source of non-stormwater discharge and required actions.	Action No.
	Yes	No	Yes	No		Yes		
Location								
Location								
Location								
Location								
Location								
Location								

Drainage Areas *If any water is retained or stored, report the following.*	Presence of floating and suspended materials?		Presence of discoloration or turbidity?		Presence of odors?		Sample Taken? *		Comments and required actions	Action No.
	Yes	No	Yes	No	Yes	No	Yes	No		
Location										
Location										
Location										
Location										
Location										
Location										

DATE 0-Jan-00

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
0 0 0 0 0	0
	PROJECT IDENTIFIER NUMBER
	0
	WDID NUMBER
	0

* Sample non-stormwater discharge at the location where the discharge leaves the jobsite and record location under drainage discharge locations.

Drainage Discharge Locations	Presence of a non-stormwater discharge?		Indication of a prior non-stormwater discharge?		Date discharge was observed	Photos?	Source of non-stormwater discharge and required actions.	Action No.
	Yes	No	Yes	No		Yes		
Location								
Location								
Location								
Location								
Location								

Drainage Discharge Locations *IF any water is flowing, report the following:*	Presence of floating and suspended materials?		Presence of discoloration or turbidity?		Presence of odors?		Discharge sample taken?		Run-On Sample Taken?		Photos?
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Location											
Location											
Location											
Location											
Location											

RISK LEVEL 3 - Drainage Discharge *IF any water is flowing, report the following:*			Upstream or un-gradient receiving water sample taken?		Downstream or down gradient receiving water sample taken?		Comments
	Yes	No	Yes	No	Yes	No	
Location							
Location							
Location							
Location							
Location							

Illegal Connection or Discharge Detection *Observe the jobsite and jobsite perimeter for illegal connections and discharges.*	Evidence of illegal connection?		Illegal discharges on jobsite?		Engineer notified of illegal connection or discharge?		Photos?	Comments and required actions	Action No.
	Yes	No	Yes	No			Yes		
Location									
Location									
Location									
Location									
Location									

DATE 0-Jan-00

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
0	0
0	PROJECT IDENTIFIER NUMBER
0	0
0	WDID NUMBER
0	0

Were samples taken? ☐ YES ☐ NO

Will there be a Notice of Discharge Filed? ☐ YES ☐ NO

COMMENTS:

Stormwater Inspection Report Certification

I certify under penalty of law that this Stormwater Inspection Report was performed in accordance with the General Permit. The information contained in this inspection report was gathered from a field site inspection. I am aware that section 309 (c)(4) of the Clean Water Act provides for significant penalties, including fines and imprisonment for knowingly submitting false material statement, representation or certification.

Stormwater Inspector Name	Date Report Completed
0	0-Jan-00

Stormwater Inspector Signature

I certify under penalty of law that this Stormwater Inspection Report was performed in accordance with the General Permit by me or under my direction or supervision. The information contained in this inspection report was gathered and evaluated by qualified personnel prior to submittal. Based on my review of the information and inquiry of those who gathered and evaluated the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that Section 309 (c)(4) of the Clean Water Act provides for significant penalties, including fines and imprisonment for knowingly submitting false material statement, representation, or certification.

Water Pollution Control Manager Name	Date
0	0-Jan-00

Water Pollution Control Manager Signature

Stormwater Inspection Report Acceptance

Accepted by Resident Engineer (Name)	Date

Resident Engineer Signature

NOTICE OF DISCHARGE

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
0 0 0 0 0	0
	PROJECT IDENTIFIER NUMBER
	0
	WDID NUMBER
	0
CONTRACTOR NAME AND ADDRESS	PROJECT RISK LEVEL
0 0 0	☐ Risk Level 1 ☐ Risk Level 2 ☐ Risk Level 3

INSPECTORS NAME and TITLE	DATE
0	0-Jan-00

Notice of Discharge General Information

DATE DISCHARGE DISCOVERED	DATE and TIME WPCM NOTIFIED	DATE and TIME RESIDENT ENGINEER NOTIFIED

DISCHARGE IDENTIFIED BY STORM WATER VISUAL SITE INSPECTION? ☐ YES ☐ NO

DISCHARGE DISCOVERED BY CONTRACTOR DURING DAILY WORK? ☐ YES ☐ NO

DISCHARGE IDENTIFIED BY REGIONAL WQCB? ☐ YES ☐ NO

DISCHARGE IDENTIFIED BY STATE WQCB? ☐ YES ☐ NO

WERE DISCHARGE SAMPLES TAKEN? ☐ YES ☐ NO

DISCHARGE TYPE: ☐ Stormwater ☐ Authorized Non-Stormwater ☐ Non-Authorized Non-Stormwater

EXCEEDANCE TYPE: ☐ Turbidity ☐ pH ☐ Other:

Storm Event Information

DATE AND TIME START OF RAIN EVENT	DATE AND TIME END OF RAIN EVENT	DURATION OF RAIN EVENT (HOURS)	PRECIPITATION AMOUNT (RAIN GUAGE)

Notice of Discharge Information	Photographs?
What was the possible nature and cause of the water quality standard exceedance based on a visual observation?	☐ YES ☐ NO
BMP's currently installed at the location of the discharge	☐ YES ☐ NO
Implementation Schedule for additional BMP's	☐ YES ☐ NO
Summary of actions taken to reduce the pollutants causing or contributing to the water quality standard exceedance	☐ YES ☐ NO

DATE OF SAMPLING	NAME OF SAMPLE COLLECTOR	NAME OF SAMPLE ANALYZER	ANALYZER PHONE NUMBER
TURBIDITY METER MANUFACTURER	TURBIDITY METER MODEL NUMBER	TURBIDITY METER SERIAL NUMBER	CALIBRATION DATE
PH METER MANUFACTURER	PH METER MODEL NUMBER	PH METER SERIAL NUMBER	CALIBRATION DATE

DATE 0-Jan-00

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
0 0 0 0 0	0
	PROJECT IDENTIFIER NUMBER
	0
	WDID NUMBER
	0

Sampling and Analysis Results

Required when discharge samples are taken

SAMPLE LOCATION	SAMPLE COLLECTION DATE / TIME	Est PRECIPITATION at time of SAMPLE	EXCEEDANCE MEASUREMENT

Sampling and Analysis Results

Required when run-on or upgrade samples are taken

SAMPLE LOCATION	SAMPLE COLLECTION DATE / TIME	Est PRECIPITATION at time of SAMPLE	EXCEEDANCE MEASUREMENT

WATER POLLUTION CONTROL MANAGER (NAME)	DATE
0	3.24.14
WATER POLLUTION CONTROL MANAGER (SIGNATURE)	DATE
	3.24.14

ACCEPTED BY RESIDNET ENGINEER (NAME)	DATE
ACCEPTED BY RESIDNET ENGINEER (SIGNATURE)	DATE

Discharge reported to the Regional Water Quality Control Board (RWQCB) via e-mail or telephone within 48hours? ☐ YES ☐ NO

Notice of Discharge Report submitted to RWQCB within 14 days? ☐ YES ☐ NO

PRE/WEEKLY/DURING/POST INSPECTION

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
	PROJECT IDENTIFIER NUMBER
	WDID NUMBER
CONTRACTOR NAME AND ADDRESS	PROJECT RISK LEVEL ☐ Risk Level 1 ☐ Risk Level 2 ☐ Risk Level 3

INSPECTORS NAME, TITLE, AND SIGNATURE	DATE OF INSPECTION	TIME OF INSPECTION

TYPE OF REPORT ☐ Pre-Storm ☐ Weekly ☐ During Event ☐ Post-Rain Event

WEATHER CONDITONS	DATE LAST STORM ENDED:
CURRENT RAIN FALL TOTAL THIS EV SOURCE ☐ NOAA ☐ RAIN GAUGE	START DATE and TIME (Est.) OF CURRENT RAIN EVENT (If report is done during event)
CURRENT ACRES EXPOSED	CURRENT CONSTRUCTION ACTIVITIES

SITE INSPECTION BMP ASSESSMENT	Adequately Maintained	Needs Maint. (See Corrective Action Summary Below)	Not Applicable on this Job
Scheduling (SS-01) *(on-site and in SWPP, Updated and reflects current operations and site conditions)*			
Preserve Existing Vegetation (SS-02) *(existing growth maintained, and no overgrowth occurring)*			
Hydraulic Mulch (SS-03) *(proper application rate, adequate tackifier, adequate wind/dust control measures)*			
Hydroseeding (SS-04) *(graded to plan, proper application, adequate tackifier, adequate wind/dust control measures)*			
Soil Binders (SS-05) *(properly spread, proper application rate)*			
Straw Mulch (SS-06) *(combo with seed, proper application rate, adequate tackifier)*			
Geotextiles/Erosion Control Blankets (SS-07) *(installed properly, no rips, tacked down and functioning properly)*			
Wood Mulching (SS-08) *(Installed properly, adequate tackifier)*			
Earth Dikes, Drainage Swales & Lined Ditches (SS-09) *(no rips or tears, properly stapled, no erosion visible)*			
Velocity Dissipation Devices (SS-10) *(all outlets that carry continuous flow, discharge points to unlined conveyances)*			
Slope Drains (SS-11) *(no rips or tears, properly stapled, no erosion visible)*			
Streambank Stabilization (SS-12) *(no rips or tears, properly stapled, no erosion visible)*			
Composite Blanket *(no rips or tears, properly stapled, no erosion visible)*			
Soil Preparation / Roughening *(ensure that tracks are horizontal)*			
Non-Vegetative Stabilization *(ensure complete coverage, ensure no discharge during installation)*			
Silt Fence (SC-01) *(in proper alignment, keyed into ground , staking secure, no tears, sediment less than 1/3 height)*			
Sediment Desilting Basin (SC-02) *(proper location, shape, size, adequate capacity)*			
Sediment Trap (SC-03) *(ensure no leaks or discharge, adequate capacity)*			

DATE:

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
0	0
0	PROJECT IDENTIFIER NUMBER
0	0
0	WDID NUMBER
0	0

Check Dams (SC-04) *(Bags positioned correctly, no degradation or tears, sediment less than 1/3 height)*			
Fiber Rolls (SC-05) *(No torn rolls, remove sediment 1/3 the depth of the rolls, properly staked to the ground)*			
Gravel Bag Barriers (SC-06) *(Bags positioned correctly, no degradation or tears, sediment less than 1/3 height)*			
Street Sweeping and Vacuuming (SC-07) *(Inspect daily, clean tracking, adjust brooms, dispose of sweepings properly)*			
Sandbag Barrier (SC-08) *(Ensure no rips or tears in bags, ensure sediment is under 1/3 of capacity)*			
Straw Bale Barrier (SC-09) *(not used as sediment barrier, or dam. Can be used as barrier protection)*			
Storm Drain Inlet Protection (SC-10) *(no tears. remove sediment, clean any stone or rock used for sediment regularly)*			
Active Treatment System *(See specifications and SWPPP for the proper use and documentation of ATS)*			
Temporary Silt Dike / Berm *(ensure no holes, or leaks)*			
Composite / Compost Socks and Berms *(ensure no rips or tears, properly anchored and trenched, shingled)*			
Bio filter Bags *(ensure no holes, tears. Sample discharge if needed).*			
Wind Erosion Controls (WE-1) *(existing wind screens or dust suppressants adequate for nuisance and/or fugitive dust)*			
Stabilized Construction Entrance/Exit (TC-1) *(check for tracking, maintain rocks / rumble strip, limit access points)*			
Stabilized Construction Roadways (TC-02) *(ensure proper rocks, or strips are used, clean, and less than 1/3 full)*			
Entrance-Outlet tire wash (TC-03) *(ensure limited/forced access. Ensure no discharge from site)*			
Water Conservation Practices (NS-01) *(prevent waste of water usage i.e.. tanks, trucks, reservoirs, buffalos, hydrants)*			
Dewatering Operations (NS-02) *(inspect per specific guidelines in dewatering plan if implemented)*			
Paving & Grinding Operations (NS-03) *(keep absorbents onsite, equipment on drip protection, no leaks)*			
Temporary Stream Crossing (NS-04) *(ensure turbid water is tested as needed, ensure testing during removal)*			
Clear Water Diversion (NS-05) *(ensure no potential soil contamination, sample as needed).*			
Illicit Connection/Discharge (NS-6) *(no discharge, no employees or subs disposing of non-job related debris)*			
Potable Water (NS-07) *(Water tanks not leaking and discharging)*			
Vehicle and Equipment Cleaning (NS-8) *(no discharges. Secondary containment, swppp plan includes this activity)*			
Vehicle and Equipment Fueling (NS-09) *(secondary containment, ensure swpp includes activity, ensure ample spill kits)*			
Vehicle and Equipment Maintenance (NS-10) *(secondary containment, swpp includes this activity, ensure spill kits)*			
Pile Driving Operations (NS-11) *(ensure spill kits, use drip protection, no leaks)*			
Concrete Curing (NS-12) *(avoid overspray, protect inlets, use sediment controls, ensure spill kit is available on site)*			
Material and Equipment use over Water (NS-13) *(ensure drip protection used, effective, and properly disposed)*			
Concrete Finishing (NS-14) *(use secondary containment, no spills, protect inlets, ensure spill kit is available on site)*			

DATE:

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
0	0
0	PROJECT IDENTIFIER NUMBER
0	0
0	WDID NUMBER
0	0

Structure Demolition / Removal Over or Adjacent to water (NS-15) *(ensure no contamination, and proper removal)*			
Temporary Batch Plant *(See specifications and SWPPP for use of batch plant)*			
Material Delivery & Storage (WM-01) *(storage areas clean, list materials on site, inspect labels, repair or replace perimeter controls, containment structures, covers and liners to maintain proper function)*			
Material Use (WM-02) *(ensure all employees are trained in the appropriate practices, and storage of materials)*			
Stockpile Management (WM-03) (Full coverage, repair and replace perimeter controls, and cover controls as needed)			
Spill Prevention & Control (WM-04) *(proper spill kits, inspect for non-storm water discharges)*			
Solid Waste Management (WM-05) *(no non-storm water discharges, mark waste areas, cover trash bins or waste piles daily, arrange for regular waste collection, ensure use of proper waste facilities, clean up waste*			
Hazardous Waste Management (WM-06) *(properly stored in secondary, properly labeled, held for less than 90 days)*			
Contaminated Soil Management (WM-07) *(stored in container marked "impacted soil", properly disposed)*			
Concrete Waste Management (WM-08) *(concrete waste bin adequate capacity, no leaks, labeled, clean up any debris)*			
Sanitary/Septic Waste Management (WM-09) *(Properly located, away from creeks, drains, inlets, regular maintenance, secondary containment, tied down, clean up all spills)*			
Liquid Waste Management (WM-10) *(secondary containment, covered, away from water bodies)*			

COMMENTS SECTION: (Special Notes about this project site)

DOES THE SWPPP NEED TO BE AMENDED? (If so, please describe below)

DATE:

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
0 0 0 0 0	0
	PROJECT IDENTIFIER NUMBER
	0
	WDID NUMBER
	0

DATE	Daily inspection performed by	Any corrective actions listed on inspection reports?		If Yes, are corrective actions shown on form CAS?		Date shown on corrective action form
		YES	NO	YES	NO	

Implement required actions identified in a storm water site inspection report summary as soon as possible, but actions must begin within 72 hours of the site inspection.

CORRECTIVE ACTION SUMMARY

Corrective action date and number			
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)

DATE:

PROJECT INFORMATION NAME AND SITE ADDRESS	CONTRACT NUMBER/CO/RTE/PM
0	0
0	PROJECT IDENTIFIER NUMBER
0	0
0	WDID NUMBER
0	0

CORRECTIVE ACTION SUMMARY

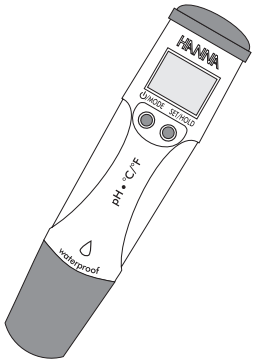
Corrective action date and number			
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)
	BMP Type		Location
	Required Action		Comments
	Date Completed or Verified	Verified by (Print Name)	Verified by (signature)

CSMP Attachment 4: Field Meter Instructions

Instruction Manual

HI 98127 • HI 98128

Waterproof pH Testers with Replaceable Electrode



HANNA instruments®

www.hannainst.com

WARRANTY

HI 98127 and **HI 98128** are **warranted for one year** against defects in workmanship and materials when used for their intended purpose and maintained according to instructions. **The electrode is warranted for a period of six months**. This warranty is limited to repair or replacement free of charge.

Damages due to accident, misuse, tampering or lack of prescribed maintenance are not covered.

If service is required, contact the dealer from whom you purchased the instrument. If under warranty, report the model number, date of purchase, serial number and the nature of the failure. If the repair is not covered by the warranty, you will be notified of the charges incurred. If the instrument is to be returned to Hanna Instruments, first obtain a Returned Goods Authorization Number from the Customer Service department and then send it with shipment costs prepaid. When shipping any instrument, make sure it is properly packaged for complete protection.

Hanna Instruments reserves the right to modify the design, construction and appearance of its products without advance notice.

Dear Customer,

Thank you for choosing a Hanna product.
This manual will provide you with the necessary information for correct operation. Please read it carefully before using the meter.
If you need additional technical information, do not hesitate to e-mail us at tech@hannainst.com.

These instruments are in compliance with the CE directives.

PRELIMINARY EXAMINATION

Remove the instrument from the packing material and examine it carefully. If any damage has occurred during shipment, immediately notify your Dealer or the nearest Hanna Customer Service Center.

Each meter is supplied with:

- **HI 73127** pH electrode
- **HI 73128** electrode removal tool
- batteries (4 x 1.5V) and instructions

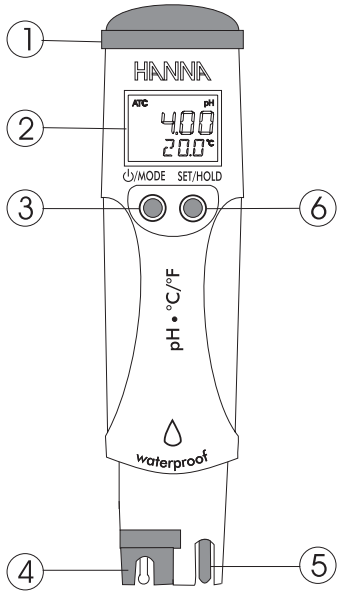
Note: Conserve all packing material until the instrument has been observed to function correctly. Any defective item must be returned in its original packing.

US DESIGN PATENT
D462,024

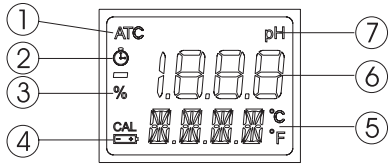
GENERAL DESCRIPTION

HI 98127 and **HI 98128** are waterproof pH and temperature meters. The housing has been completely sealed against humidity and designed to float.
All pH readings are automatically temperature compensated (ATC), and temperature values can be displayed in °C or °F units.
The meters can be calibrated at one or two points with auto-buffer recognition and against five memorized buffer values.
Measurements are highly accurate with a unique stability indicator right on the LCD.
These meters are also provided with battery level indication at start-up, and with a low battery symbol which warns the user when the batteries need to be replaced. In addition the Battery Error Prevention System (BEPS) avoids erroneous reading caused by low voltage level by turning the meter off.
The **HI 73127** pH electrode, supplied with the meters, is interchangeable and can be easily replaced.
The stainless steel encapsulated temperature sensor facilitates faster and more accurate temperature measurement and compensation.

FUNCTIONAL DESCRIPTION



1. Battery compartment
2. Liquid Crystal Display (LCD)
3. ON/OFF/MODE button
4. **HI 73127** pH electrode
5. Temperature sensor
6. SET/HOLD button



1. ATC (Automatic Temperature Compensation) indicator
2. Stability indicator
3. Battery life percentage indicator
4. Low battery indicator
5. Secondary display
6. Primary display
7. Measuring unit for primary display

CE DECLARATION OF CONFORMITY

HANNA instruments

CE

DECLARATION OF CONFORMITY

We

Hanna Instruments Italia Srl
via E.Fermi, 10
35030 Sarmeola di Rubano - PD
ITALY

herewith certify that the pH & temperature meters

HI 98127 and **HI 98128**

have been tested and found to be in compliance with EMC Directive 89/336/EEC and Low Voltage Directive 73/23/EEC according to the following applicable normatives:

EN 50082-1: Electromagnetic Compatibility - Generic Immunity Standard
IEC 61000-4-2 Electrostatic Discharge
IEC 61000-4-3 RF Radiated

EN 50081-1: Electromagnetic Compatibility - Generic Emission Standard
EN 55022 Radiated, Class B

EN61010-1: Safety requirements for electrical equipment for measurement, control and laboratory use

Date of Issue: 13.02.2002

A.Marsilio - Technical Director

On behalf of
Hanna Instruments S.r.l.

Recommendations for Users
Before using this product, make sure that it is entirely suitable for the environment in which it is used.
The glass bulb at the end of the electrode is sensitive to electrostatic discharges. Avoid touching the glass bulb at all times.
Any variation introduced by the user to the supplied equipment may degrade the instrument's EMC performance.
To avoid electrical shock, do not use this instrument when voltages at the measurement surface exceed 24 Vac or 60 Vdc. To avoid damages or burns, do not perform any measurement in microwave ovens.

ACCESSORIES

HI 73127	Replaceable pH electrode
HI 73128	Electrode removal tool
HI 70004P	pH 4.01 solution, 20 mL sachet (25 pcs)
HI 70006P	pH 6.86 solution, 20 mL sachet (25 pcs)
HI 70007P	pH 7.01 solution, 20 mL sachet (25 pcs)
HI 70009P	pH 9.18 solution, 20 mL sachet (25 pcs)
HI 70010P	pH 10.01 solution, 20 mL sachet (25 pcs)
HI 77400P	pH 4 & 7 solutions, 20 mL sachet (5 each)
HI 7004M	pH 4.01 solution, 230 mL bottle
HI 7006M	pH 6.86 solution, 230 mL bottle
HI 7007M	pH 7.01 solution, 230 mL bottle
HI 7009M	pH 9.18 solution, 230 mL bottle
HI 7010M	pH 10.01 solution, 230 mL bottle
HI 7061M	Electrode cleaning solution, 230 mL bottle
HI 70300M	Electrode storage solution, 230 mL bottle

IST98127R5 07/05

SPECIFICATIONS

Range	-2.0 to 16.0 pH (**HI 98127**) -2.00 to 16.00 pH (**HI 98128**) -5.0 to 60.0°C / 23.0 to 140.0°F
Resolution	0.1 pH (**HI 98127**) 0.01 pH (**HI 98128**) 0.1°C / 0.1°F
Accuracy (@20°C/68°F)	±0.1 pH (**HI 98127**) ±0.05 pH (**HI 98128**) ±0.5°C / ±1°F
Typical EMC Deviation	±0.1 pH (**HI 98127**) ±0.02 pH (**HI 98128**) ±0.3°C / ±0.6°F
Temp. Compensation	Automatic
Environment	-5 to 50°C (23 to 122°F); RH 100%
Calibration	1 or 2 points with 2 sets of memorized buffers (pH 4.01/7.01/10.01 or 4.01/6.86/9.18)
Electrode	**HI 73127** pH electrode (included)
Battery	4 x 1.5V with BEPS / approx. 300 hours
Auto-off	after 8 minutes of non-use
Dimensions	163 x 40 x 26 mm (6.4 x 1.6 x 1.0")
Weight	100 g (3.5 oz)

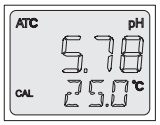
OPERATIONAL GUIDE

To turn the meter on and check the battery status

Press and hold the ⏻/MODE button until the LCD lights up. All the used segments on the LCD will be visible for 1 second (or as long as the button is pressed), followed by the percent indication of the remaining battery life (E.g. % 100 BATT).

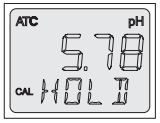
Taking measurements

Submerge the electrode in the solution to be tested while stirring it gently. The measurements should be taken when the stability symbol ▯ on the top left of the LCD disappears.



The pH value automatically compensated for temperature is shown on the primary LCD while the secondary LCD shows the temperature of the sample.

To freeze the display



While in measurement mode, press the SET/HOLD button. HOLD appears on the secondary display and the reading will be frozen on the LCD (E.g. pH 5.78 HOLD).

Press any button to return to normal mode.

To turn the meter off

While in normal mode, press the ⏻/MODE button. OFF will appear on the secondary display. Release the button.

Notes:

• Before taking any measurements make sure the meter has been calibrated (CAL tag present on the LCD).

• If measurements are taken in different samples successively, rinse the probe thoroughly to eliminate cross-contamination; and after cleaning, rinse the probe with some of the sample to be measured.

CALIBRATION

For better accuracy, frequent calibration of the instrument is recommended. In addition, the instrument must be recalibrated whenever:

a) The pH electrode is replaced.
b) After testing aggressive chemicals.
c) Where high accuracy is required.
d) At least once a month.

Calibration procedure

From normal measuring mode, press and hold the ⏻/MODE button until OFF on the secondary LCD is replaced by CAL. Release the button. The LCD enters the calibration mode displaying "pH 7.01 USE" (or "pH 6.86 USE" if the NIST buffer set was selected).

After 1 second the meter activates the automatic buffer recognition feature. If a valid buffer is detected then its value is shown on the primary display and REC appears on the secondary LCD. If no valid buffer is detected, the meter keeps the USE indication active for 12 seconds, and then it replaces it with WRNG, indicating the sample being measured is not a valid buffer.

For a **single-point calibration** with buffers pH 4.01, 9.18 or 10.01, the meter automatically accepts the calibration when the reading is stable; the meter displays the accepted buffer, with the message "OK 1". After 1 second the meter automatically returns to the normal measuring mode.

If a single-point calibration with buffer pH 7.01 (or pH 6.86) is desired, then after the calibration point has been accepted the ⏻/MODE button must be pressed in order to return to normal mode. After the button is pressed, the meter shows "7.01" (or "6.86") - "OK 1" and, after 1 second, it automatically returns to the normal measuring mode.

Note: It is always recommended to carry out a two-point calibration for better accuracy.

For a **two-point calibration**, place the electrode in pH 7.01 (or pH 6.86) buffer. After the first calibration point has been accepted, the "pH 4.01 USE" message appears. The message is held for 12 seconds, unless a valid buffer is recognized. If no valid buffer is recognized, then the WRNG message is shown. If a valid buffer (pH 4.01, pH 10.01, or pH 9.18) is detected, then the meter completes the calibration procedure. When the buffer is accepted, the LCD shows the accepted value with the "OK 2" message, and then the meter returns to the normal measuring mode.

Note: When the calibration procedure is completed, the CAL tag is turned on.

To quit calibration and to reset to the default values

• After entering the calibration mode and before the first point is accepted, it is possible to quit the procedure and return to the last calibration data by pressing the ⏻/MODE button. The secondary LCD displays "ESC" for 1 second and the meter returns to the normal measuring mode.

• To reset to the default values and clear a previous calibration, press the SET/HOLD button after entering the calibration mode and before the first point is accepted. The secondary LCD displays "CLR" for 1 second, the meter resets to the default calibration and the CAL tag on the LCD disappears.

SETUP

Setup mode allows the selection of temperature unit and pH buffer set.

To enter the Setup mode, press the ⏻/MODE button until CAL on the secondary display is replaced by TEMP and the current temperature unit (E.g. TEMP °C). Then:

• *for °C/°F selection*: Use the SET/HOLD button. After the temperature unit has been selected, press the ⏻/MODE button to enter the buffer set selection mode; press the ⏻/MODE button twice to return to the normal measuring mode.

• *to change the calibration buffer set*: After setting the temperature unit, the meter will show the current buffer set: "pH 7.01 BUFF" (for 4.01/7.01/10.01) or "pH 6.86 BUFF" (for NIST 4.01/6.86/9.18). Change the set with the SET/HOLD button, then press ⏻/MODE to return to normal measuring mode.

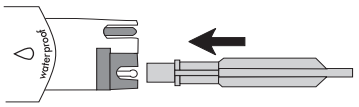
pH ELECTRODE MAINTENANCE

• When not in use, rinse the electrode with water to minimize contamination and store it with a few drops of **HI 70300** storage solution in the protective cap. DO NOT USE DISTILLED OR DEIONIZED WATER FOR STORAGE PURPOSES.

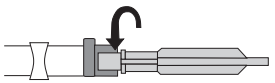
• If the electrode has been left dry, soak in storage solution for at least one hour to reactivate it.

• To prolong the life of the pH electrode, it is recommended to clean it monthly by immersing it in the **HI 7061** cleaning solution for half an hour. Afterwards, rinse it thoroughly with tap water and recalibrate the meter.

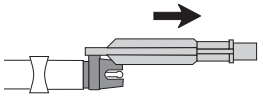
• The pH electrode can be easily replaced by using the supplied tool (**HI 73128**). Insert the tool into the electrode cavity as shown below.



• Rotate the electrode counterclockwise.



• Pull the electrode out by using the other side of the tool.

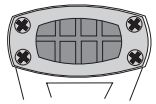


• Insert a new pH electrode following the above instructions in reverse order.

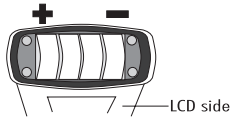
BATTERY REPLACEMENT

The meter displays the remaining battery percentage every time it is switched on. When the battery level is below 5%, the ▭ symbol on the bottom left of the LCD lights up to indicate a low battery condition. The batteries should be replaced soon. If the battery level is low enough to cause erroneous readings, the meter shows "0%" and the Battery Error Prevention System (BEPS) will automatically turn the meter off.

To change the batteries, remove the 4 screws located on the top of the meter.



Once the top has been removed, carefully replace the 4 batteries located in the compartment while paying attention to their polarity.



Replace the top, making sure that the gasket is properly seated in place, and tighten the screws to ensure a watertight seal.

Material Safety Data Sheet

Issuing Date 11/19/2009 **Revision Date** 2/21/2013 **Revision Number** 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **TURBIDITY STD., 0.0 NTU 2020 / TC 3000 EPA/ISO**

Product Code(s) 1480

Recommended Use Laboratory chemicals. Industrial (not for food or food contact use).

Company

LaMotte Company, Inc.
802 Washington Avenue
P.O. Box 329
Chestertown, MD 21620
USA

Emergency Telephone Number

24 Hour Emergency Number (CHEM-TEL):
USA, Canada, Puerto Rico 1-800-255-3924
Outside North American Continent (Call collect) 813-248-0585

2. HAZARDS IDENTIFICATION

Emergency Overview

The product contains no substances which in their current physical state are considered to be hazardous to health

Appearance Clear, colorless **Physical State** Liquid **Odor** Odorless

OSHA Regulatory Status This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Potential Health Effects

Principle Routes of Exposure Ingestion.

Acute Toxicity

- **Eyes** No hazard from product as supplied.
- **Skin** No known hazard in contact with skin.
- **Inhalation** Not an expected route of exposure.
- **Ingestion** No known effect based on information supplied.

Chronic Effects

Main Symptoms No information available.

Aggravated Medical Conditions None known.

Interactions with Other Chemicals Not applicable.

Environmental Hazard There is no known ecological information for this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula Water

Chemical Name	CAS-No	Weight %
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	9003-70-7	0
Water	7732-18-5	100

4. FIRST AID MEASURES

General Advice No hazards which require special first aid measures.

Eye Contact None under normal use.

Skin Contact None under normal use.

Inhalation Not applicable.

Ingestion None under normal use.

Notes to Physician Treat symptomatically.

Protection of First-aiders Use personal protective equipment. See Section 8 for more detail.

5. FIRE-FIGHTING MEASURES

Flammable Properties Not a fire hazard.

Suitable Extinguishing Media Water spray, dry chemical, carbon dioxide (CO_2), or foam.

NFPA	**Health Hazard** 0	**Flammability** 0	**Stability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 0	**Flammability** 0	**Stability** 0	

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions None required.

Methods for Cleaning Up Soak up with inert absorbent material.

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice. Do not ingest. Do not eat, drink, or smoke when using this product.

Storage Keep containers tightly closed in a dry, cool, and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH

AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water 9003-70-7	None Known	None Known	None Known
Water 7732-18-5	None Known	None Known	None Known

Personal Protective Equipment

Eye/Face Protection No special protective equipment required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Clear, colorless	**Odor**	Odorless
Physical State	Liquid	**pH**	6.0 - 7.0
Boiling Point/Range		100 °C / 212 °F	

Water Solubility Infinite

10. STABILITY AND REACTIVITY

Stability Stable.

Incompatible Products Not applicable.

Conditions to Avoid Extremes of temperature and direct sunlight.

Hazardous Decomposition Products None under normal use.

Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	None Known	None Known	None Known
Water	90 mL/kg (Rat)	None Known	None Known

Chronic Toxicity

Chemical Name	ACGIH	IARC	NTP	OSHA
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

Chemical Name	EU - Endocrine Disrupters Candidate List	EU - Endocrine Disruptors - Evaluated Substances	Japan - Endocrine Disruptor Information
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	None Known	None Known	None Known
Water	None Known	None Known	None Known

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Toxicity to Algae	Toxicity to Fish	Microtox	Daphnia Magna (Water Flea)
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known

Chemical Name	Log Pow
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	None Known
Water	None Known

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method Can be disposed as waste water, when in compliance with local regulations.

Chemical Name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water - 9003-70-7	None Known	None Known	None Known	None Known
Water - 7732-18-5	None Known	None Known	None Known	None Known

14. TRANSPORT INFORMATION

DOT Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

Component	TSCA	DSL	EINECS/ELINCS	ENCS	IECSC	KECL	PICCS	AICS
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water 9003-70-7 (0)	XU	X	EINECS/ELINCS	6-155; 6-167; 6-2006	X	KE-10320	X	X
Water 7732-18-5 (100)	Present	X	X	ENCS	X	KE-35400	X	X

U.S. Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	9003-70-7	0	None Known
Water	7732-18-5	100	None Known

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water 9003-70-7 (0)	None Known	None Known	None Known	None Known
Water 7732-18-5 (100)	None Known	None Known	None Known	None Known

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	9003-70-7	0	None Known	None Known	None Known	None Known
Water	7732-18-5	100	None Known	None Known	None Known	None Known

CERCLA

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	None Known	None Known
Water	None Known	None Known

U.S. State Regulations

Chemical Name	CAS-No	California Prop. 65
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	9003-70-7	None Known
Water	7732-18-5	None Known

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	None Known	None Known	None Known	None Known	None Known
Water	None Known	None Known	None Known	None Known	None Known

International Regulations

Mexico - Grade No information available.

Chemical Name	Carcinogen Status	Exposure Limits
AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water	None Known	None Known
Water	None Known	None Known

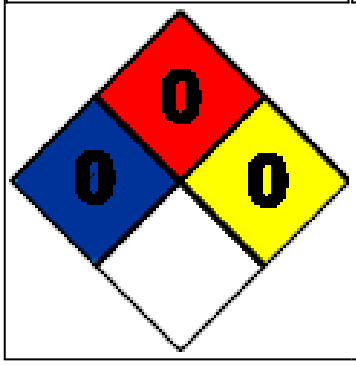
Canada

Component	WHMIS Hazard Class

AMCO polymer spheres (Styrene Divinyl Benzene Copolymer Beads) suspended in water 9003-70-7 (0)	Not determined
Water 7732-18-5 (100)	Uncontrolled product according to WHMIS classification criteria

16. OTHER INFORMATION

NFPA	HMIS	PPE	Transport Symbol



Health Hazard	0
Fire Hazard	0
Reactivity	0

Prepared By Regulatory Affairs Department
Issuing Date 11/19/2009
Revision Date 21-Feb-2013
Revision Note MSDS was reviewed per Canada request - Canada requires a 3 yr MSDS review.
Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS

CSMP Attachment 5: Supplemental Information

Section 8 References

Project Plans and Specifications No. 161-10015 dated 12/21/2011, prepared by Jubany NAC Architecture.

State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Storm Water Discharge Associated with Construction and Land Disturbing Activities. Available on-line at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

State Water Resources Control Board (2010). Order 2010-0014-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Storm Water Discharge Associated with Construction and Land Disturbing Activities. Available on-line at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

Geotechnical Engineering Investigation, Revised March 20, 2013 by Geotechnologies, Inc.

CASQA 2009, *Stormwater BMP Handbook Portal: Construction*, November 2009, www.casqa.org