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Via FedEx

July 29, 2011
In reply refer to SHEA-111349

Ms. Cassandra Owens
Regional Water Quality Control Board
Los Angeles Region
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: ISRA Performance Monitoring and Potential BMP Subarea Monitoring for the Outfalls 008 and 009 Watersheds, 2010/2011 Rainy Season, The Boeing Company, Santa Susana Field Laboratory, Canoga, CA (Order No. R4-2010-0090; NPDES No. CA0001309, CI No. 6027; and, California Water Code §13304 Order; NPDES NO. CA0001309, CI NO. 1111, Site ID No. 2040109)

Dear Ms. Owens:

Per the requirements of The Boeing Company's (Boeing) National Pollutant Discharge Elimination System (NPDES) Permit and a California Water Code §13304 Cleanup and Abatement Order dated December 3, 2008, Boeing is providing the attached ISRA Performance Monitoring and Best Management Practices (BMP) Monitoring Report for the Outfalls 008 and 009 Watersheds for the 2010/2011 rain season. This document has been developed with input and in accordance with recommendations from the Santa Susana Surface Water Expert Panel, and prepared for Boeing and the National Aeronautics and Space Administration (NASA). The attached report will be posted on the Boeing External website at the following address: http://www.boeing.com/aboutus/environment/santa_susana/isra.html

If you have any questions or require any further assistance, please contact Debbie Taege at 818-466-8849.

Sincerely,


Tom Gallacher
Director, Santa Susana Field Laboratory
Environment, Health and Safety

Attachment: ISRA Performance Monitoring and Potential BMP Subarea Monitoring for the Outfalls 008 and 009 Watersheds, 2010/2011 Rainy Season

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**ISRA PERFORMANCE MONITORING AND POTENTIAL BMP
SUBAREA MONITORING FOR THE OUTFALLS 008 AND 009
WATERSHEDS, 2010/2011 RAINY SEASON
SANTA SUSANA FIELD LABORATORY
VENTURA COUNTY, CALIFORNIA**

July 2011

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¹ The "Expert Panel" documents listed here were prepared first by Geosyntec, based on detailed discussion with and guidance from the Expert Panel, and then the drafts were reviewed, edited, and approved by the Panel prior to finalizing. This process is necessary in order to accommodate the Expert Panel members' limited availability.

ABBREVIATIONS AND ACRONYMS

AP/STP	Ash Pile and Building 515 Sewage Treatment Plant
BMP	Best Management Practice
BEF	bioaccumulation equivalency factor
Boeing	The Boeing Company
CAO	Cleanup and Abatement Order
CM	culvert modification
COC	constituents of concern
cy	cubic yards
DTSC	Department of Toxic Substances Control
DNQ	data not qualified
ELV	Expendable Launch Vehicle
EMPC	estimated maximum possible concentration
ENTS	Engineered Natural Treatment Systems
Expert Panel	Santa Susana Site Surface Water Expert Panel
Geosyntec	Geosyntec Consultants
H&A	Haley & Aldrich, Inc.
HDPE	high-density polyethylene
HVS	Happy Valley South
ISRA	Interim Source Removal Action
LOX	liquid oxygen
MWH	MWH Americas, Inc.
NASA	National Aeronautics and Space Administration
NPDES	National Pollutant Discharge Elimination System
PSD	particle size distribution
PVC	polyvinyl chloride
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
RMMP	Restoration, Mitigation, and Monitoring Plan
RWQCB	Los Angeles Regional Water Quality Control Board
SAP	sampling and analysis plan
SRG	soil remediation goal

ABBREVIATIONS AND ACRONYMS (continued)

Santa Susana Site	Santa Susana Field Laboratory
TA	Test America Laboratories, Inc.
TCDD	tetrachlorobenzo-p-dioxin
TEF	toxic equivalency factor
TEQ	toxic equivalency
TSS	total suspended solids
WWE	Wright Water Engineers, Inc.

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1.0 INTRODUCTION

This report summarizes the Interim Source Removal Action (ISRA) performance monitoring and potential Best Management Practices (BMP) subarea monitoring activities and results from the 2010/2011 rainy season within the Outfalls 008 and 009 watersheds at the Santa Susana Field Laboratory (Santa Susana Site), Ventura County, California. This report also includes an overall summary of ISRA performance monitoring results collected to date, an evaluation of the potential BMP sites based on subarea monitoring results, and recommendations for modifications to the ISRA performance monitoring and potential BMP subarea monitoring programs.

ISRA performance monitoring involves the monitoring of stormwater runoff at completed ISRA areas and select culvert modifications (CMs), and supplements the ISRA program being performed pursuant to a California Water Code Section 13304 Cleanup and Abatement Order (CAO) issued by the Los Angeles Regional Water Quality Control Board (RWQCB) dated December 3, 2008 (RWQCB, 2008). Potential BMP subarea monitoring involves the monitoring of stormwater at areas receiving runoff from potential source areas and other infrastructure (e.g., roads, buildings, parking areas) where installation of BMPs is being considered and is performed per the BMP Plan (MWH Americas, Inc. [MWH] *et al.*, 2010), which was prepared pursuant to the National Pollutant Discharge Elimination System (NPDES) Permit (Order R4-2010-0090) adopted by the RWQCB on June 3, 2010 (RWQCB, 2010a). The ISRA program and the BMP Plan are being implemented with oversight and participation of the RWQCB with the objective of meeting the requirements for Outfalls 008 and 009 established in the NPDES Permit. Neither of these studies is an extension of the NPDES program, and therefore data collected as part of these studies are not a measurement of NPDES compliance within the watersheds.

ISRA performance monitoring and potential BMP subarea monitoring activities were conducted by MWH on behalf of The Boeing Company (Boeing) and the National Aeronautics and Space Administration (NASA) according to the 2010/2011 BMP and ISRA Performance Monitoring Sampling and Analysis Plan (SAP) referred to throughout the remainder of this report as the 2010/2011 BMP and ISRA SAP (MWH, 2010e). This summary report was prepared for Boeing and NASA by Geosyntec Consultants (Geosyntec) and MWH with input from and in accordance with the recommendations from the Santa Susana Site Surface Water Expert Panel (Expert Panel) and Haley & Aldrich, Inc. (H&A).

1.1 PROJECT BACKGROUND

The Santa Susana Site is located approximately 29 miles northwest of downtown Los Angeles, California, in the southeast corner of Ventura County. Stormwater discharges at the Santa

Susana Site are monitored at 16 outfalls according to the NPDES Permit. Stormwater discharges from the site are exclusively the result of stormwater runoff and are intermittent following rain events. The locations of Outfalls 008 and 009 watersheds, the subject outfalls of the ISRA program and the BMP Plan, are shown in Figure 1-1.

The NPDES Permit established monitoring at Outfalls 008 and 009 in August 2004, and NPDES permit limits were first established for these two outfalls in 2005-2006. Constituents for which there have been NPDES permit limit and benchmark exceedances at Outfalls 008 and 009 between 2004 and May 2011, based on the limits in effect at the time of discharge, include lead at Outfall 008; and copper, lead, dioxins, pH, and oil and grease at Outfall 009 (Boeing, 2005, 2006, 2007, 2008, 2009, 2010, 2011b). In addition, based on an evaluation of all stormwater samples collected at Outfalls 008 and 009 since August 2004, including sample data collected for monitoring before the NPDES permit limits/benchmarks were established, constituents of concern (COCs) have been identified to include copper, lead, and dioxins at Outfall 008, and cadmium, copper, lead, mercury, dioxins, pH, and oil/grease at Outfall 009. Since the exceedances of oil and grease and pH at Outfall 009 each occurred only once and were attributed to natural causes (Boeing, 2005 and 2006), they are not considered COCs. Results of samples collected at Outfalls 008 and 009 above NPDES permit limits/benchmarks since August 2004 are presented in Tables 1-1 and 1-2, respectively. For the purpose of this report, total suspended solids (TSS) is also included as a COC for Outfalls 008 and 009 since it may be associated with the other COCs; however, TSS is not regulated at Outfall 008 or 009 by the NPDES permit.

In response to exceedances of NPDES permit limits and benchmarks at Outfalls 008 and 009, the RWQCB issued the ISRA CAO dated December 3, 2008 and included the requirement to prepare a BMP Plan in the NPDES permit adopted on June 3, 2010. These two activities are described in further detail below.

1.2 ISRA PROGRAM

The ISRA program is being performed pursuant to a CAO issued by the RWQCB dated December 3, 2008 (RWQCB, 2008). The objective of the CAO is to improve stormwater quality within the Outfalls 008 and 009 watersheds by identifying and evaluating areas of contaminated soil containing COCs that have resulted in exceedances of NPDES permit limits and benchmarks in stormwater, and implementing an appropriate source removal alternative (e.g., excavation and offsite disposal, capping with a clay cap, or constructing diversion and collection structures). As stated in Section 1.1, the COCs for stormwater are copper, lead, and dioxins at Outfall 008, and cadmium, copper, lead, mercury, and dioxins at Outfall 009.

ISRA Work Plans and work plan addenda (MWH, 2009a-c, 2010c, and NASA, 2009) describing the ISRA identification and remedial planning process were submitted to and approved by the

RWQCB. The work plans also present the soil remediation goals (SRGs) for the ISRA project, which are consistent with Department of Toxic Substances Control (DTSC)-approved soil background concentrations (MWH, 2005). The SRG for dioxins is slightly higher than current background levels (approximately 3 times the background concentration) because the Outfalls 008 and 009 watersheds were extensively burned during the 2005 Topanga Fire, depositing naturally occurring dioxin-containing ash and burned debris throughout the area. As stated in the ISRA work plans, the ISRA project is being conducted in annual phases to allow for completion of ongoing work within the Outfall 009 watershed (Northern Drainage cleanup and stormwater maintenance activities), and to accommodate federal funding schedules for work to be performed on NASA property.

Phase I ISRA activities were completed during the early portion of the 2009/2010 rainy season and Phase II ISRA activities were completed during the early portion of the 2010/2011 rainy season, with activities presented in yearly summary reports (MWH, 2010b, 2011). Phase I ISRA activities included excavation and restoration at ten ISRA areas in the Outfall 008 watershed, including CYN-1, DRG-1, HVS-1, HVS-2A, HVS-2B-1, HVS-2B-2, HVS-2C, HVS-2D, HVS-3, and HVS-4, and two ISRA areas within the Outfall 009 watershed, including A2LF-1 and A2LF-3. In addition, culvert inlet upgrades were performed at 12 CMs within the Outfall 009 watershed in 2009 as part of the Santa Susana Site stormwater maintenance program (CM-1 through CM-12). With the exception of CM-7, culvert inlets were retrofitted with inlet weirs to allow temporary ponding/sedimentation and media mounds with underdrains to facilitate filtration of stormwater. Phase II ISRA activities included excavation and restoration at 11 ISRA areas in the Outfall 009 watershed, including AP/STP-1A, AP/STP-1D, AP/STP-1F, B1-1A, B1-1B, B1-1C, B1-1D, B1-2, CTLI-1A, CTLI-1B, and IEL-1. Phase III ISRA activities planned for 2011 are currently ongoing, and include excavation and restoration at seven ISRA areas within the Outfall 009 watershed, including IEL-2, AP/STP-1B, AP/STP-1C-1, AP/STP-1C-2, AP/STP-1E-1, AP/STP-1E-2, and AP/STP-1E-3. Additional phases of ISRA activities are planned following the completion of Phase III activities at 14 ISRA areas within the Outfall 009 watershed, including A1LF-1, A1LF-2, A2LF-2A, A2LF-2B, ELV-1C, ELV-1D, IEL-3, LOX-1A, LOX-1B-1, LOX-1B-2, LOX-1B-3, LOX-1B-4, LOX-1C, and LOX-1D. ISRA areas and CMs are shown on Figures 1-2, 1-3, and 1-4.

Following completion of remedial actions, performance monitoring is proposed to be performed at each ISRA area for a minimum of 2 years. A summary of the performance monitoring program is provided below.

1.2.1 ISRA Performance Monitoring Program

ISRA performance monitoring involved the collection of stormwater samples both up- and down-gradient of each completed ISRA area and select CM systems to obtain water quality performance data to assess the contribution of COCs to stormwater within the Outfalls 008 and 009 watersheds following completion of remedial activities or CM activities. The performance data associated with the CM systems were also collected to assess the effectiveness of the CMs at promoting sediment settling and removing COCs. Performance monitoring will continue through two rainy seasons for each monitoring location; however, the actual study duration will depend on the quantity and quality of data collected at the performance monitoring locations and the associated outfall. This program is not meant to be a comprehensive study of COCs in stormwater within the Outfalls 008 and 009 watersheds or an extension of the NPDES program. Furthermore, the overall effectiveness of the ISRA remedial activities and the CM systems will be based on compliance with the NPDES Permit at the outfall monitoring locations.

Performance monitoring was initiated during the 2009/2010 rainy season at the 12 ISRA areas completed during Phase I implementation listed in Section 1.2 and five of the CM systems, including CM-1, CM-3, CM-8, CM-9, and CM-11, with activities conducted according to the ISRA Performance Monitoring Sampling and Analysis Plan (2009/2010 Rainy Season SAP) (MWH, 2010e). Phase I ISRA area A2LF-3 is located within the culvert inlet area of CM-1 and the performance monitoring locations serve to monitor both CM-1 and A2LF-3. CM-8, CM-9, and CM-11 were selected for performance monitoring because historical sample results upgradient of these CMs indicate the culvert inlet area and/or associated drainage contain soil with COCs at concentrations greater than ISRA SRGs, although the CM-8 and CM-11 drainage areas do not contain areas of historical site activities. CM-3 was selected for performance monitoring to provide additional reference system monitoring data since its drainage area is also minimally impacted by historical site activities; furthermore, historical sample results indicate the culvert inlet area and associated drainage do not contain soil with COCs at concentrations greater than ISRA SRGs. The performance monitoring activities and results from the 2009/2010 rainy season are presented in a memorandum (MWH, 2010d). A summary of the results from the 2009/2010 rainy season is provided in Section 2.1.

Performance monitoring continued at ISRA areas completed during Phase I implementation and the five CM systems during the 2010/2011 rainy season. In addition, performance monitoring was conducted at the 11 ISRA areas completed during Phase II implementation. A summary of the performance monitoring and sampling plan for the 2010/2011 rainy season is provided in Section 1.4. A summary of the results from the 2010/2011 rainy season is provided in Section 2.2. An up- and down-gradient evaluation of ISRA performance monitoring results

collected to date, and recommendations for modifications to the ISRA performance monitoring program are included in Sections 2.3 and 2.4, respectively.

1.3 BMP PLAN

The BMP Plan, prepared in October 2010 pursuant to the NPDES Permit, describes the process for improving stormwater runoff quality and minimizing NPDES Permit exceedances in the Outfalls 008 and 009 watersheds at the Santa Susana Site (MWH *et al.*, 2010). The BMP Plan presents the refined strategy for the subject outfall drainages based on ongoing source removal actions (e.g., Northern Drainage cleanup, ISRAs, and demolition activities), and recently obtained data/information (e.g., NPDES data, performance monitoring data, dioxin and metals stormwater background studies). The refined strategy is to target stormwater BMPs² at locations where either existing data and/or new data generated as part of the plan indicate that BMPs may be required, while considering the list of guiding principles established by the Expert Panel (MWH *et al.*, 2010). The BMP Plan also describes the types of BMPs available, grouping BMPs as either source, erosion, and sediment controls, or treatment controls (i.e., Engineered Natural Treatment Systems [ENTS]), and provides the approach and criteria for identifying BMP sites and selecting the BMP type(s) for each location.

The BMP Plan also summarizes BMP activities that are planned, are underway, or have been completed in the Outfalls 008 and 009 watersheds, referred to as short-term activities. Short-term activities include ISRA remediation and erosion control activities, Northern Drainage restoration activities, and several erosion and treatment control recommendations from the Expert Panel. A status update for the short-term activities is provided in Section 1.3.1. In addition, the BMP Plan identifies activities that will be performed as part of the BMP evaluation and implementation planning process at the identified potential BMP sites, referred to as long-term activities. Several long-term activities are ongoing or have been completed since

² Stormwater BMPs include source, erosion, sediment, and treatment controls. Source controls are practices that aim to reduce the quantity and improve the quality of stormwater runoff at or near the source of the constituents of concern. This may include schedules of activities (such as demolition activities and remediation activities to minimize exposure to potential runoff), structural devices (either constructed or natural), maintenance procedures, and managerial or operational practices such as removing the sources of contamination. Erosion controls (a subset of source controls) are practices that protect sediment from eroding under rainfall, flowing water and/or wind conditions. Effective erosion controls are techniques in preventing water pollution and soil loss through minimization of soil or vegetation disturbance; the use of physical barriers, such as vegetation, rock, and runoff diversions to reduce the energy of the water that is causing the erosion; and stabilization measures of disturbed areas. These measures are often implemented in conjunction with sediment controls. Sediment controls are practices designed to keep already eroded soil from discharging and causing water pollution to receiving waters. Sediment control measures are usually passive systems that rely on filtering or settling of particles from the stormwater runoff. Treatment controls are engineered systems designed to remove pollutants by gravity settling of sediments, filtration, biological uptake, media adsorption or other physical, biological or chemical processes.

submittal of the BMP Plan, including developing and implementing a potential BMP subarea monitoring program, evaluating existing surface water data, developing a prioritized ranking of sites for placing new BMPs, and developing BMP sizing criteria. Summaries of the potential BMP subarea monitoring program, the BMP site ranking approach, and the BMP sizing criteria are provided in Sections 1.3.2, 1.3.3, and 1.3.4, respectively.

1.3.1 Short-Term Activities Updates

The following are updates to the short-term activities listed in the BMP Plan that are being performed to improve surface water quality in the Outfalls 008 and 009 watersheds. These activities are shown on Figures 1-2, 1-3, and 1-4.

ISRA Activities. ISRA activities were completed at 11 ISRA areas within the Outfall 009 watershed in 2010, resulting in approximately 7,500 cubic yards (cy, *ex situ* estimate) of soil removed. Erosion control BMPs including fiber rolls, hay bales, silt fences, and hydroseed mulch were installed on and near the restored excavations. In addition, containerized plants (for the purpose of providing additional long-term erosion control benefit) were installed following a planting plan developed by the Expert Panel.

ISRA activities are currently ongoing within the Outfall 009 watershed, with 7 ISRA areas planned for 2011 and 11 additional ISRA areas planned for after 2011, with a total volume of soil to be removed of approximately 16,000 cy (*ex situ* estimate). Erosion controls were installed throughout these 2011 ISRA areas, and a detention basin was also installed at the B-1 area for sediment control.

Northern Drainage Restoration Activities. Phase I channel stabilization measures were implemented in 2010 in the Northern Drainage east of the former Liquid Oxygen (LOX) Plant site. These measures included placement of 10 cy of riprap along a 35-foot-long section of channel bank and placement of approximately 10,000 square feet of hydroseed mulch on an adjacent slope outside the channel. Phase II will be described in a Restoration, Mitigation, and Monitoring Plan (RMMP) that is planned to be submitted in September 2011. The RMMP will describe the proposed placement of riprap grade controls and instream culvert outlet energy dissipation structures, as well as bank protection that utilizes Erosion Control Blanket and Turf Reinforcement Mat. The RMMP will include 60% design drawings that specify where each measure will be located, and the quantity of material required for each. The RMMP will also describe mitigation planting and monitoring program elements. The RMMP is being jointly developed by Boeing, NASA, H&A, MWH, Geosyntec, Padre, and the Expert Panel. Implementation of the proposed measures is tentatively scheduled for 2011-2013.

Road Rehabilitation/Maintenance. Dirt road rehabilitation activities have been performed at several fire roads within the Outfall 008 watershed, and at the dirt roads used to access ISRA areas CTLI-1 and B1-1 in the Outfall 009 watershed. Dirt road rehabilitation/maintenance activities are planned for 2011 along the access road below (north of) the Areas II Landfill in the Outfall 009 watershed.

Additional Miscellaneous Erosion Control Installations. Installation and maintenance of additional erosion control BMPs (e.g., hydroseed mulch, straw wattles, culvert outlet protection, etc.) are performed continuously at the Santa Susana Site based on recommendations following routine inspections conducted per the site-wide SWPPP or individual construction SWPPPs to identify and mitigate sources of pollution to surface water. Performance of inspections prior to and during rain events to identify soil erosion features are critical in identifying BMP maintenance locations and implementing corrective actions in a timely manner to minimize the transportation of soil in surface water runoff.

Culvert Modifications (CMs). Installation of a culvert inlet filter, or a CM at the culvert adjacent to the entrance road in the B-1 Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) site is planned for Summer/Fall 2011. The CM will include a riser outlet structure that is surrounded by a bed of filter media that is underlain by a perforated polyvinyl chloride (PVC) underdrain collection pipe. This CM will benefit from adjacent hillside erosion controls as well as an upgradient sediment basin, which will provide pretreatment and peak flow reduction before the CM. A CM was not implemented downgradient of the AP/STP ISRA areas, as mentioned in the BMP Plan, because insufficient surface water flow was observed during visual inspections performed during the 2010/2011 rainy season.

At completed CMs, an assessment of sediment accumulation up-gradient of the culverts is performed periodically throughout the rainy season, and sediment removal performed as necessary. During the Winter/Spring 2011, sediment removal was performed at CM-2, -3, -6, -8, -9, and -11 totaling approximately 50 cy.

Soil Stockpile Area Biofilter. Construction of a treatment control BMP to control runoff from the paved, 5-acre soil stockpile area in the lower parking lot is planned to begin in the Summer/Fall 2011. This area was originally identified by Boeing and the Expert Panel as a key area for stormwater capture and treatment because of the soil stockpiling and management activities, a potential source of COCs to stormwater, that are expected to continue in the lower parking lot throughout the duration of site remediation activities. The BMP design includes a collection sump, a sedimentation basin, and a biofilter, which contains treatment media. Effluent from the biofilter will be discharged into a rock-lined portion of the Northern Drainage west of the biofilter site. This BMP will also treat low, first flush flows from a larger developed drainage area that is upslope of the lower parking lot via connection to an adjacent 24-inch stormdrain line.

Asphalt Removal³ and Site Restoration. Removal of approximately 1.5 acres of asphalt pavement at the Building 324 parking lot (adjacent to the A1LF) and approximately 1.8 acres of asphalt pavement on Sage Ranch and the Santa Susana Site adjacent to the lower parking lot are planned for Summer/Fall 2011. Both areas are in the Outfall 009 watershed.

Electric Pole Runoff Control. A creosote-coated wood electric pole survey is being conducted to identify the remaining creosote-coated poles within the Outfalls 008 and 009 watersheds. Following the completion of the survey, an evaluation will be performed to assess the need to either remove/replace or install runoff capture devices around the poles, such as rings containing treatment media.

1.3.2 Potential BMP Subarea Monitoring Program, Outfalls 008/009 Watersheds

A potential BMP subarea monitoring program was developed that involves the collection of stormwater samples at locations receiving runoff from potential source areas and other infrastructure (e.g., roads, buildings, parking areas) within the Outfalls 008 and 009 watersheds. The potential BMP subarea monitoring program is being conducted to collect data to assess the potential for contribution of COCs from the potential source areas to stormwater runoff and to identify locations for new BMPs, as described in the BMP Plan (MWH, et al., 2010). Monitoring locations also include sites where treatment controls are planned (e.g., B-1 CM and soil stockpile area biofilter), to confirm the need for such BMPs and to provide baseline data for later evaluation of BMP performance. In addition, monitoring of stormwater runoff quality from natural undisturbed or “stormwater background” areas located on Sage Ranch and the Santa Susana Site was performed to provide reference monitoring data or site-specific stormwater background data⁴. This program is not meant to be a comprehensive study of COCs in stormwater within the Outfalls 008 and 009 watersheds or an extension of the NPDES program.

Potential BMP subarea monitoring was initiated during the 2010/2011 rainy season. A summary of the potential BMP subarea monitoring and sampling plan for the 2010/2011 rainy season is provided in Section 1.4. A summary of the results from the 2010/2011 rainy season is provided

³ Stormwater runoff from asphalt pavement may contribute metals and dioxins concentrations that are above background due to: (1) regional atmospheric deposition (which over time builds up and more effectively washes off pavement during rain events unlike open ground areas where stormwater runoff may partially infiltrate or be sequestered by plants), (2) contributions from the asphalt emulsion and/or pavement sealant themselves, and/or (3) contributions from vehicles (e.g., brake dust, oil leaks, and exhaust particulates).

⁴ The site-specific stormwater background dataset is for the assessment of stormwater only and is not considered part of the ongoing soil background sampling activities being conducted under DTSC oversight.

in Section 3.1. Recommendations for BMP sites and modifications to the subarea monitoring program are included in Section 3.2.

1.3.3 Potential BMP Site Ranking Analysis Approach

An approach was developed by the Expert Panel for ranking the potential BMP sites to prioritize the locations based on water quality considerations. A letter summarizing the BMP site ranking analysis approach was submitted to the RWQCB on June 22, 2011 (Expert Panel, 2011). The approach involves an evaluation of available data from the Outfalls 008 and 009 watersheds, including performance monitoring data, potential BMP subarea monitoring data, and NPDES monitoring data. The evaluation follows these steps:

1. Comparing potential BMP subarea monitoring results with site-specific stormwater background data and NPDES permit limits;
2. Calculating constituent (metals, dioxins, TSS)-specific weighting factors for each potential BMP site based on the results of Step 1 using a statistical methodology that accounts for sample size and number of results that are above both of these thresholds, with the highest weighting factors assigned to sites that most frequently exceed both of these thresholds;
3. Calculating multi-constituent ranking scores for each potential BMP site based on the constituent-specific weighting factors; and
4. Ranking the potential BMP sites based on these multi-constituent ranking scores.

The top-ranked potential BMP subarea monitoring sites are then evaluated on a site-by-site basis. The selection evaluation considers several additional factors besides the multi-constituent rankings, including NPDES monitoring results at the outfall, BMP implementation opportunities and constraints, status of source removal activities, status of building and asphalt demolition, proximity of subarea discharge relative to the NPDES compliance monitoring location, construction status of planned BMPs, and performance and maintenance of existing BMPs. The potential BMP site ranking and selection process described above is planned to occur on a yearly basis through the end of the BMP Plan coverage period, currently scheduled for 2014.

1.3.4 BMP Sizing Criteria

The existing Santa Susana Site BMP sizing criteria developed by the Expert Panel is for the capture of runoff from the 1-year 24-hour storm event, or alternatively 90% long-term runoff volume capture (these are roughly equivalent). This criteria will be used for the sizing of new treatment controls for the BMP Plan, and will also be evaluated by the Expert Panel on a site-by-site basis as individual projects are developed. These site-specific considerations will

include constructability constraints (including available space), stormwater monitoring results, anticipated BMP functional lifetime, and other information.

1.4 2010/2011 RAINY SEASON PERFORMANCE AND POTENTIAL BMP SUBAREA MONITORING

Performance monitoring and potential BMP subarea monitoring conducted during the 2010/2011 rainy season were performed in accordance with the 2010/2011 Rainy Season SAP (MWH, 2010e). The SAP describes surface water sampling locations, collection methods, frequency, analytes, and Quality Assurance/Quality Control (QA/QC) protocols. Performance monitoring and BMP monitoring inspections were performed during daylight hours as soon as possible after the rain event began and at 24 hour intervals during extended rain events. During inspections, if sufficient stormwater runoff was observed at a sample location, a sample was collected from the flowing water if the work could be performed safely following the procedures and sample frequency presented in the SAP. During sample collection, every effort was made to collect representative stormwater runoff and to minimize sediment disturbance.

ISRA performance monitoring during the 2010/2011 rainy season involved the collection of stormwater runoff samples both up- and downgradient of the 12 ISRA areas completed in 2009, the 11 ISRA areas completed in 2010, and five of the CM systems (CM-1, CM-3, CM-8, CM-9, and CM-11). The actual performance monitoring inspection and sample locations from the 2010/2011 rainy season are listed in Table 1-3 and shown on Figure 1-5. The table and figure are slightly revised from the SAP based on field conditions and observations. As shown on Figure 1-5, primary and secondary downgradient performance sample locations were monitored during the 2010/2011 rainy season for ISRA areas in Outfall 008 and in Outfall 009 near the B-1 RFI site, similar to the approach used during the 2009/2010 rainy season in Outfall 008. The primary sample locations assess overall effectiveness of multiple ISRA areas, and are placed in areas where runoff has historically been observed during most rain events. Secondary performance sample locations are located downgradient of the individual remedial areas; samples collected from these locations were placed on hold at the laboratory and analyzed if primary sample results indicate the need to further assess downgradient effects.

Split samples of select performance monitoring samples were collected during the 2010/2011 rainy season for the RWQCB. The SAP specified the collection of RWQCB split samples using the splitting protocol presented in a memorandum prepared by Wright Water Engineers, Inc. (WWE) and the Expert Panel (WWE and Expert Panel, 2010), which was approved by the RWQCB (RWQCB, 2010b). The protocol describes procedures for the collection of primary samples, field blanks, equipment blanks, and preparation of RWQCB split samples using a Dekaport cone splitter, a positive pour device that composites and splits the sample in one step. Laboratory reporting requirements for identifying laboratory QA/QC problems are also presented

in the memorandum. Splitter preparatory activities began following approval of the protocols by the RWQCB, and splitter implementation began during the February 16, 2011 sampling event. RWQCB split sample collection activities included collecting a sample with sufficient volume to generate a primary and split sample, shipping the entire sample volume to a California State certified laboratory (Test America Laboratories Inc.-Irvine [TA]). TA conducted the split sampling following the approved protocols. Split samples were shipped to the RWQCB laboratory for analysis. This implementation process was detailed in a letter submitted to the RWQCB (Boeing, 2011a). An evaluation of the performance of the splitter is presented in Section 2.2.3.

Potential BMP subarea monitoring during the 2010/2011 rainy season involved the collection of stormwater runoff samples at 16 “planned”⁵ or “potential”⁶ BMP sites and 5 locations identified to monitor stormwater runoff quality from natural undisturbed or “stormwater background” areas. The inspection and sample locations are listed in Table 1-4 and shown on Figure 1-5. Additional details regarding the Expert Panel’s recommended sampling location selection, protocols, and frequency are provided in a memorandum prepared by Geosyntec and the Expert Panel (Geosyntec and Expert Panel, 2010), which was an attachment to the 2010/2011 Rainy Season SAP.

Data validation was performed on select performance monitoring and potential BMP subarea monitoring samples during the 2010/2011 rainy season at either a Level II or a Level IV to evaluate data for program, method and laboratory quality control compliance, and to determine the validity and usability of the data. A Level II validation involves a review of field methods and a high-level review of laboratory methods. A Level IV validation is a definitive evaluation of the data and involves a very detailed review of the field and laboratory processes. A Level IV validation requires the validator to reproduce a percentage of the results from the raw data files to ensure that systemic errors, errors of omission, or transcription errors are not present in the final reported data. During the 2010/2011 rainy season, a Level II validation was performed on all dioxin results for the potential BMP subarea monitoring program and for dioxin results above the permit limit for the performance monitoring program. The primary purpose of performing a Level II validation on the dioxin results was to address blank contamination and estimated

⁵ “Planned” treatment BMPs include those that are expected to be designed and constructed in 2011, irrespective of subarea monitoring results.

⁶ “Potential” treatment BMPs include those that will be considered based on comparison of subarea monitoring results with onsite stormwater background concentrations and NPDES limits; if deemed necessary, new BMPs will be designed in late 2011 and constructed thereafter.

maximum possible concentration (EMPC) values⁷. In addition, validation was performed to investigate two anomalous metals results for the potential BMP monitoring program at a Level II and to investigate the performance of the Dekaport Cone Splitter during one sampling event at a Level IV.

A summary of the performance monitoring activities and results for the 2010/2011 rainy season is provided in Section 2.2. An up- and down-gradient evaluation of ISRA performance monitoring results collected to date, and recommendations for modifications to the ISRA performance monitoring program are included in Sections 2.3 and 2.4, respectively. A summary of the potential BMP subarea monitoring activities and results for the 2010/2011 rainy season is provided in Section 3.1. The recommendations for BMP sites and modifications to the subarea monitoring program are included in Section 3.2 and 3.3, respectively.

1.5 2010/2011 RAINY SEASON DISCHARGE EVENT SUMMARY

The Santa Susana Site NPDES Permit definition of a discharge (rain) event is one that produces more than 0.1 inches of rainfall in a 24-hour period and must be preceded by at least 72 hours of dry weather. By this measure, thirteen rain events occurred at the Santa Susana Site during the 2010/2011 rainy season. The dates of each rain event and the total measured rainfall recorded at a RWQCB approved weather station within Area IV, as reported in the NPDES Discharge Monitoring Reports (Boeing, 2011b and c) are provided in Table 1-5. The table also includes average rainfall intensity and maximum one hour rainfall intensity, and a summary of sampling activities for the NPDES, performance monitoring, and potential BMP subarea monitoring programs.

During the 2010/2011 rainy season, the amount of rain received (23.51 inches) is approximately 30% above the average yearly rainfall for the region (~18 inches/year for the period between 1960 and 2006). For comparison, the previous three rainy seasons were measured at 16.65 inches in 2007/2008, 11.10 inches in 2008/2009, and 19.04 inches in 2009/2010 from the Santa Susana Site rain gauge. Approximately 55% of the rainfall received during the 2010/2011 rainy season occurred during two large, multi-day rain events; the December 17-22, 2010 rain event and the March 18-27, 2011 rain event, which measured 7.22 inches and 6.00 inches of rainfall, respectively.

⁷ An EMPC value is assigned to a dioxin isomer when a peak is within the retention time window of a target dioxin or furan isomer; however, at least one of the identification criteria from the method was not met for that peak. Therefore this peak cannot be positively identified as a dioxin/furan. The Level II validation process would evaluate the EMPC values and revise these values to non-detects at either the level of interference or the reporting limit, whichever is higher.

1.6 NPDES MONITORING, 2010/2011 RAINY SEASON

NPDES monitoring and sampling of Outfalls 008 and 009 conducted during the 2010/2011 rainy season was performed in accordance with the NPDES permit adopted on June 3, 2010. During the 2010/2011 rainy season, 6 samples were collected at Outfall 008 and 13 samples were collected at Outfall 009. The dates and associated rain event information for these samples are presented in Table 1-5. The concentrations of the outfall-specific COCs and field measurements for Outfalls 008 and 009 are presented in Tables 1-6 and 1-7, respectively⁸. During the 2010/2011 rainy season, one sample collected from Outfall 008 contained lead above the NPDES permit limit, one sample collected from Outfall 009 contained lead above the NPDES permit limit, and two samples collected from Outfall 009 contained dioxins above the NPDES permit limit. The NPDES results are further discussed during the evaluation of performance monitoring and BMP monitoring results in Sections 2.0 and 3.0, respectively. A complete set of NPDES sampling results and an evaluation of the data for Outfalls 008 and 009 are presented in the NPDES Discharge Monitoring Reports (Boeing, 2011b and c).

1.7 REPORT CONTENT

This summary report includes the following four sections and seven appendices:

- Section 1 presents project background information, describes the scope and objectives of the ISRA performance monitoring and potential BMP subarea monitoring programs, a summary of the rainfall discharge summary for the 2010/2011 rainy season, and a summary of the Outfalls 008 and 009 NPDES sampling results for the 2010/2011 rainy season.
- Section 2 presents a summary of the ISRA performance monitoring results from the 2009/2010 and 2010/2011 rainy seasons, and recommendations for modifications to the ISRA performance monitoring program.
- Section 3 presents a summary of the potential BMP subarea monitoring results from the 2010/2011 rainy season, the results of the Expert Panel's analysis of this data, and the Expert Panel's recommendations for modifications to the potential BMP subarea monitoring program for 2011/2012 rainy season.
- Section 4 presents the updated milestone schedule.

⁸ Per the NPDES permit adopted on June 3, 2010, dioxin toxic equivalency (TEQ) concentrations for NPDES samples were calculated during the 2010/2011 rainy season by multiplying each congener concentration by its respective toxic equivalency factor (TEF) and bioaccumulation equivalency factor (BEF), and excluding congener data not qualified (DNQ) results. Dioxin TEQ concentrations in samples collected prior to the 2010/2011 rainy season were calculated per the previous NPDES permits by multiplying each congener concentration only by its respective TEF, excluding congener DNQ results.

- Appendix A provides the BMP Site Ranking Analysis Approach memorandum for the RWQCB prepared by the Expert Panel.
- Appendix B provides the 2010/2011 rainy season discharge event rainfall and sampling graphs.
- Appendix C provides laboratory and validation reports for performance monitoring and potential BMP subarea monitoring samples collected during the 2010/2011 rainy season.
- Appendix D provides time-series and correlation charts for the performance monitoring program.
- Appendix E provides the ISRA sample splits comparison memorandum prepared by the Expert Panel.
- Appendix F provides the ISRA performance monitoring data analysis memorandum prepared by the Expert Panel.
- Appendix G provides time-series and correlation charts for the potential BMP subarea monitoring program.
- Appendix H provides the BMP site ranking analysis memorandum prepared by the Expert Panel.

2.0 ISRA PERFORMANCE MONITORING SUMMARY

Performance monitoring was initiated during the 2009/2010 rainy season within the Outfalls 008 and 009 watersheds following completion of the Phase I ISRA areas and CM activities. Monitoring continued at these areas, and was initiated at Phase II ISRA areas, during the 2010/2011 rainy season. Results of the performance monitoring activities conducted during the 2009/2010 rainy season are presented in a memorandum (MWH, 2010d), and are summarized in Section 2.1. Section 2.2 presents the 2010/2011 rainy season performance monitoring activities and results, Section 2.3 presents an up- and down-gradient evaluation of performance monitoring data collected to date, and Section 2.4 presents recommendations for modifications to the ISRA performance monitoring program.

2.1 2009/2010 RAINY SEASON SUMMARY

Performance monitoring during the 2009/2010 rainy season consisted of stormwater runoff inspections and sampling at the 12 Phase I ISRA areas and five of the CM systems, including CM-1, CM-3, CM-8, CM-9, and CM-11. The activities were conducted according to the 2009/2010 Rainy Season SAP (MWH, 2010a) and involved the collection of stormwater runoff samples both up- and down-gradient of the Phase I ISRA areas and CM systems. During the 2009/2010 rainy season, 62 ISRA performance samples were collected and analyzed from a total of 28 locations. The monitoring locations and sampling dates are shown on Figures 2-1 through 2-7. A summary of the monitoring and sampling activities and results are presented in a memorandum (MWH, 2010d), and a summary of the results and conclusions from the report is provided below. Subsequent to submittal of the summary report, a validation was performed on dioxin results above the permit limit to address blank contamination and EMPC values. Additionally, all 2009/2010 dioxin toxic equivalency (TEQ) concentrations were recalculated by multiplying each congener result by its respective toxic equivalency factor (TEF) and bioaccumulation equivalency factor (BEF), and excluding congener data not qualified (DNQ) results so that the 2009/2010 and 2010/2011 performance monitoring results are comparable. The updated performance monitoring sample results from the 2009/2010 rainy season are presented in Tables 2-1 and 2-2.

The data collected during the 2009/2010 rainy season represents the first of the proposed two years of rainy season monitoring for these areas, as recommended in the SAP. As such, the interpretation of the 2009/2010 rainy season performance monitoring data was constrained by several factors, including the relatively small number of up- and down-gradient sample pairs collected, the “in progress” restoration conditions at ISRA areas as re-vegetation occurs, and the relatively large variability of the results. Sample variability is not unexpected given the number of factors influencing stormwater monitoring results in a watershed, including rainfall intensity,

rainfall duration, stormwater flow volumes and rates, suspended sediment load, BMP maintenance activities, sample collection methodology and timing during the storm, and laboratory analysis procedures. Based on the available data, the following observations were made:

- Lead and dioxin concentrations were periodically detected above NPDES values during both ISRA performance monitoring and NPDES monitoring, and copper and mercury each were detected above NPDES values in a single event at one location during the ISRA performance monitoring. Most detections above NPDES values occurred in the earliest storms of the rainy season prior to BMP corrective actions.
- Where soil sampling concentrations are less than ISRA SRGs (which are near to or consistent with naturally occurring background levels), higher performance monitoring sampling results are associated with higher TSS concentrations. Higher TSS concentrations are likely related to increased erosion following implementation of remedial activities while re-vegetation occurs, or in other areas of erosion.
- ISRA performance monitoring and NPDES Outfall sampling results on occasion exceeded the NPDES values in some locations where concentrations of COCs in soil are below background, indicating that naturally occurring soil concentrations can serve as sources of elevated stormwater concentrations compared to the NPDES permit values. This observation is consistent with the white papers prepared by the Expert Panel, which found that background soil levels of metals and dioxins from open space areas can exceed the Santa Susana Site NPDES limits (Expert Panel, 2009 and 2010a).

Continued performance monitoring at these 12 ISRA areas and 4 CMs during the 2010/2011 rainy season will increase the number of samples for data evaluation and assessment. An overall assessment of the Phase I ISRA areas following the proposed 2 years of monitoring is provided in Section 2.3.

2.2 2010/2011 RAINY SEASON ACTIVITIES AND RESULTS

Performance monitoring during the 2010/2011 rainy season consisted of stormwater runoff inspections and sampling at the 12 Phase I ISRA areas, the 11 Phase II ISRA areas, and five of the CM systems, including CM-1, CM-3, CM-8, CM-9, and CM-11, however, sampling was initiated at the Phase II ISRA areas during the February 15-20, 2011 rain event following completion of ISRA activities. The data collected during the 2010/2011 rainy season represents the second of the proposed two years of rainy season monitoring for the Phase I ISRA areas and the five CM systems, and the first of the proposed two years of rainy season monitoring for the Phase II ISRA areas. The activities were conducted according to the 2010/2011 Rainy Season SAP (MWH, 2010e) and involved the collection of stormwater runoff samples both up- and

down-gradient of the ISRA areas and CM systems. A summary of the 2010/2011 inspection and sampling activities and results are presented below.

2.2.1 Inspection and Sampling Activities

During the 2010/2011 rainy season, 15 performance samples were collected and analyzed from a total of 7 locations within the Outfall 008 watershed and 76 performance samples were collected and analyzed from a total of 18 locations within the Outfall 009 watershed. Additionally, 20 performance monitoring samples were collected and placed on hold within the Outfall 008 watershed and 4 samples were collected and placed on hold within the Outfall 009 watershed. The samples placed on hold were not subsequently analyzed because they monitored individual ISRA areas (as described in the 2010/2011 Rainy Season SAP, samples downgradient of multiple ISRA areas were preferentially performed to gauge overall effectiveness of the remedial action). The RWQCB collected 106 split samples during 8 of the 9 rain events of the 2010/2011 rainy season during which performance monitoring samples were collected (no RWQCB splits collected during the October 5-6, 2010 event). Of the 106 splits samples, 90 were analyzed and 16 were placed on hold and not subsequently analyzed, consistent with the associated primary sample. A summary of the number of primary performance monitoring samples collected during each rain event is presented in Table 1-5. The performance monitoring samples collected during the 2010/2011 rainy season, including RWQCB splits, are listed in Table 2-3. The monitoring locations and dates on which ISRA performance monitoring samples were collected are shown on Figures 2-1 through 2-7. Graphs of rainfall in inches per hour for the 2010/2011 rain events during which a performance monitoring sample was collected, along with the performance monitoring sampling times, are included in Appendix B.

Performance monitoring samples were not collected from five of the planned locations within the Outfall 008 watershed and 16 of the planned locations within the Outfall 009 watershed during the 2010/2011 rainy season because flowing stormwater was not present during inspections. The five locations within the Outfall 008 watershed include up-gradient of CYN-1, down-gradient of HVS-1, downgradient of HVS-2B-1, and up- and down-gradient of HVS-2C. The 16 locations within the Outfall 009 watershed include up- and downgradient of AP/STP-1A/-1D/-1F (6 locations), up-gradient of B1-1A, up- and down-gradient of B1-1B/-1C/-1D (5 locations), up-gradient of B1-2, up- and downgradient of IEL-1, and up-gradient of CTLI-1A. Additionally, performance monitoring samples were not collected up- and downgradient of A2LF-1 during the 2010/2011 rainy season because of the large flow volume in the Northern Drainage channel prohibited safe access to the sampling locations.

Field measurements of primary performance monitoring samples included turbidity, temperature, pH, and conductivity. Laboratory analysis of primary and split performance

monitoring samples included NPDES COCs associated with the ISRA or CM areas and TSS, as described in the 2010/2011 Rainy Season SAP (MWH, 2010e). The analytical suite and laboratory method for each sample listed in Table 1-3 was performed with the following exceptions:

- Dioxins analysis was not performed on one RWQCB split sample collected on December 26, 2010 because the sample container for dioxins analysis was inadvertently not submitted to the laboratory (sample location LXS0002).
- Dioxins analysis was not performed on six RWQCB split samples collected on December 29, 2010 because the sample container for dioxins analysis broke during shipment between the primary laboratory and the RWQCB split laboratory (sample locations A2SW0001, A1SW0005, A2SW0006, A1SW0007, HZSW0003, and LXS0002).
- Dioxins analysis was not performed on one primary and one RWQCB split sample collected on February 19, 2011 because of laboratory error using the Dekaport sample splitter (sample location A1SW0004).

2.2.2 Sample Results

ISRA performance monitoring analytical results, including RWQCB split samples, field measurements, and rainfall event measurements from the 2010/2011 rainy season are presented in Tables 2-4 and 2-5. The performance monitoring results are separated into two tables, Tables 2-4A and 2-4B, since there are two primary up- and down-gradient evaluation areas, including the drainage associated with ISRA areas CYN-1/DRG-1 and the drainage associated with the eight Happy Valley South (HVS) ISRA areas. Outfall 009 performance monitoring results are presented in seven tables, Tables 2-5A through 2-5G, since there are seven separate up- and downgradient evaluation areas, including the four drainages associated with ISRA areas A2LF-3/CM-1, B1-1/B1-2, CTLI-1 and the three drainages associated with CM-3, CM-8, and CM-9. Laboratory reports for performance monitoring samples (primary and RWQCB splits) are included in Appendix C.

Performance monitoring sample results were compared to NPDES outfall results to assess whether there is a general pattern of water quality changes as runoff travels down the watersheds and to provide a context for evaluating possible contributions to NPDES samples at the outfalls. To support this evaluation, (1) time-series charts showing performance monitoring results versus sample collection date are provided in Appendix D-1 for each NPDES COC detected above the NPDES limit at each up- and down-gradient evaluation area, and (2) time-series charts showing performance monitoring and NPDES monitoring results versus sample collection date are provided in Appendix D-2 for each NPDES COC detected within each outfall. Additionally, to

assess the general understanding that the NPDES COCs are associated with soils and are mobilized by stormwater runoff when these soils are eroded and suspended in the water column, correlation charts are provided in Appendix D-3 showing performance monitoring results versus TSS for each NPDES COC detected within each outfall. The charts include all performance monitoring sample results collected to date to assess whether there is a general trend of water quality changes between the 2009/2010 and 2010/2011 rainy seasons.

The Expert Panel also performed a statistical evaluation of up-gradient versus down-gradient concentrations for the entire performance monitoring data set. The Expert Panel's conclusions and recommendations based on this evaluation are presented in Section 2.3.

2.2.2.1 Outfall 008 Watershed Sample Results

Within the Outfall 008 watershed, performance monitoring samples were analyzed for one or more of the Outfall 008 COCs, including copper, lead, and dioxins. Below is a summary of the Outfall 008 performance monitoring and NPDES sample results, and general trends observed in the results; the summary below does not consider RWQCB split samples.

- Lead, copper, and dioxins were not detected in ISRA performance monitoring or Outfall 008 NPDES samples at concentrations above the NPDES limit during the 2010/2011 rainy season with the exception of lead in one ISRA performance monitoring sample (an upgradient location) and one Outfall 008 NPDES sample; both samples were collected during a rain event early in the rainy season (December).
- Performance monitoring samples collected to date show positive correlations between copper and lead concentrations and TSS concentrations, confirming the general understanding that these COCs are associated with soil particulate matter. A correlation between dioxins and TSS concentrations was limited by the high number of non-detect results.
- In general, Outfall 008 NPDES results for lead and copper are greater than performance monitoring results for most sampling events, indicating that contributions of these COCs may be from natural channel bed materials (soils and associated minerals) being re-suspended in the drainage between the upland subareas and the downstream outfall location where concentrated water velocities and shear stresses are greater and/or from dirt roads. The relationship of dioxins and TSS concentrations between ISRA performance monitoring and Outfall 008 NPDES samples is less consistent based on available data (i.e., neither the performance monitoring or the outfall sample results are consistently greater than the other). These results may indicate that a consistent relationship is not apparent due to data variability, or they may indicate that the ISRA areas may occasionally contribute to concentrations observed at the outfall.

- In general, for Outfall 008 COCs, both performance monitoring and NPDES results indicate a decreasing trend over time when comparing 2009/2010 and 2010/2011 results. This may be a result of the source removal, erosion control, and re-vegetation activities performed in the Outfall 008 watershed shown on Figure 1-2.

2.2.2.2 Outfall 009 Watershed Sample Results

Within the Outfall 009 watershed, performance monitoring samples were analyzed for one or more of the Outfall 009 COCs, including cadmium, copper, lead, mercury, and dioxins. Below is a summary of the Outfall 009 performance monitoring and NPDES sample results, and general trends observed in the results; the summary below does not consider RWQCB split samples.

- Cadmium and mercury were not detected in ISRA performance monitoring or Outfall 009 NPDES samples at concentrations above the NPDES limit during the 2010/2011 rainy season. Copper, lead, and/or dioxins were detected above the NPDES limit in 11 ISRA performance monitoring samples associated with ISRA area A2LF-3/CM-1, ISRA area B1-1/B1-2, CM-8, and CM-9, and 2 Outfall 009 NPDES samples during the 2010/2011 rainy season.
- Performance monitoring samples collected to date show positive correlations between copper and lead concentrations and TSS concentrations, confirming the general understanding that these COCs are associated with soil particulate matter. Correlations between cadmium, mercury, and dioxins concentrations and TSS concentrations were limited by the high number of non-detect results (all mercury results are non-detect).
- The relationship of Outfall 009 COCs between ISRA performance monitoring and Outfall 009 NPDES samples collected to date is not consistent based on available data (i.e., neither the performance monitoring or the outfall sample results are consistently greater than the other). These results may indicate that a consistent relationship is not apparent due to data variability, or they may indicate that the ISRA areas may occasionally contribute to concentrations observed at the outfall.
- Concentrations of Outfall 009 COCs in performance monitoring samples collected to date do not appear to show either an increasing or decreasing trend with time when comparing 2009/2010 and 2010/2011 results.

2.2.3 Splitter Performance Evaluation

The RWQCB collected split samples of select performance monitoring samples during the 2009/2010 and 2010/2011 rainy seasons. Initially, RWQCB split samples were collected by filling a secondary container (the split) after filling the primary container (the sample) following the procedures specified in the SAP, which does not result in the collection of a true split. As such, a Dekaport (cone) splitter was implemented on February 16, 2011 following the protocol

specified in the 2010/2011 rainy season SAP and presented in a memorandum prepared by WWE and the Expert Panel (WWE and Expert Panel, 2010), with the implementation process detailed in a letter submitted to the RWQCB (Boeing, 2011a).

An evaluation of the performance of the Dekaport splitter was performed by the Expert Panel, with results presented in a memorandum (Geosyntec and Expert Panel, 2011b) included in Appendix E. The memorandum evaluated the correlation between split and primary samples for copper, lead, dioxins and TSS; an evaluation of split and primary samples cadmium and mercury results was not performed because the dataset is limited by the high number of non-detect results. In general, implementation of the Dekaport splitter appears to improve the correlation of split to primary sample results for the NPDES COCs evaluated, with the greatest improvement seen for TSS. Since the Dekaport splitter is designed specifically to minimize split sampling errors in TSS water samples, the reduction of scatter in the TSS data indicates that the splitter is performing satisfactorily. Lead split versus sample results showed the strongest correlation. The dioxin split versus sample correlation was limited by the large number of non-detect results. Where split versus sample differences remain, this may be explained by various factors such as differences between laboratory QA/QC, analysis and/or reporting practices. The statistical variability between NPDES COC data and TSS data can be an alert for checking laboratory QA/QC or reporting practices; this variability is something that the Expert Panel recommends tracking as additional data are collected. Finally, a comparison of primary sample results (those analyzed by TA) and split results (those analyzed by the RWQCB laboratory) was performed and although a statistically significant bias was not identified due to the low number of samples collected, it was apparent that most primary sample results were greater than the split sample results for copper and lead. Therefore, the Expert Panel recommends that Boeing and the RWQCB consider a small inter-laboratory study to evaluate this difference, such as sending blind standards to each laboratory for quality evaluation purposes (i.e., spiked samples with known concentrations that are sent to each lab without their awareness).

2.3 UP- AND DOWN-GRADIENT EVALUATION

An evaluation of up-gradient versus down-gradient performance monitoring sample results was performed by the Expert Panel, with results presented in a memorandum (Geosyntec and Expert Panel, 2011a) included in Appendix F. The memorandum evaluated data collected during the 2009/2010 and 2010/2011 rainy seasons to identify if (1) any of the excavated and stabilized ISRA areas are contributing NPDES COCs (i.e., increasing concentrations as stormwater runoff sheetflows across each area), and 2) the CM treatment BMPs are reducing NPDES COCs (decreasing concentrations as stormwater ponds and filters through the media mounds and travels through each culvert liner). The evaluation used only paired data, or locations with both an

upgradient and downgradient sample collected from the same storm event; RWQCB split samples were not used.

In general, data indicate that downgradient ISRA and CM concentrations tend to be lower than corresponding upgradient samples, suggesting positive performance of the ISRA soil removals and erosion controls and of the CM treatment systems. Exceptions include turbidity (both ISRA and CM data), and dioxin (both ISRA and CM data), all of which have no noticeable downgradient increase or decrease. It should also be noted that for the ISRA areas, having comparable upgradient and downgradient concentrations is considered a positive outcome as it suggests that these actions resulted in indistinguishable stormwater quality changes in comparison to unimpacted (upgradient) runoff quality. Copper (both ISRA and CM data), lead (CM data) and TSS (CM data) were found to have statistically significant reductions (water quality improvements) when the downgradient concentrations were compared to the upgradient concentrations. The reductions in downgradient TSS concentrations at the CMs are supported by observations noting significant sediment capture at each site. Also, limited underdrain sampling data indicated that filtered stormwater from the CMs, prior to traveling through the high-density polyethylene (HDPE) culverts, meets NPDES permit limits for the COCs.

2.4 PERFORMANCE MONITORING PROGRAM RECOMMENDATIONS

The performance monitoring program was proposed to be performed through two rainy seasons for each monitoring location; however, the actual study duration is dependent on the quantity and quality of data collected at the performance monitoring locations and the associated outfall. The Expert Panel evaluated the dataset for the 12 Phase I ISRA areas (10 in the Outfall 008 watershed and 2 in the Outfall 009 watershed) and the five CM systems for which the 2010/2011 rainy season was the second rainy season of monitoring, and included the results of this evaluation in the memorandum (Geosyntec and Expert Panel, 2011a) included in Appendix F. The primary conclusion of the evaluation was that for all monitoring locations, the datasets for these areas are limited by the small number of up- and down-gradient pairs and sufficient confidence in the dataset to end sampling at any of the performance monitoring locations is not believed to be achieved at this time. However, because performance monitoring samples at the 10 Phase I ISRA areas within the Outfall 008 watershed and the NPDES samples were rarely detected above the NPDES limits (only lead one time for each) and there appears to be a decreasing trend over time when comparing 2009/2010 and 2010/2011 results (see Section 2.2.2.1), it is recommended that continued sampling be conducted at these locations only during three rain events that produce runoff at Outfall 008 during the 2011/2012 rainy season, with data re-evaluated next summer to determine if there is sufficient confidence in the dataset to end sampling at that time. This reduced sampling effort will be used to verify consistent observations at the ISRA sites considering the large variability in site runoff and rainfall

conditions from the different rain years. Performance monitoring at the two Phase I ISRA areas within the Outfall 009 watershed, A2LF-1 and CM-1/A2LF-3, will continue during each rain event of the 2011/2012 rainy season. Performance monitoring samples have not been collected to date at ISRA area A2LF-1 due to safety concerns accessing the sample location during rain events; however, site inspections at the A2LF-1 performance monitoring locations will continue and performance monitoring samples will be collected when conditions allow. Performance monitoring samples both up- and down-gradient of CM-1/A2LF-3 contain dioxin concentrations above NPDES limits, and monitoring will continue during the 2011/2012 rainy season to provide data for evaluating new BMPs that will be implemented up-gradient of this evaluation area (see Section 3.2). Performance monitoring at the five CM locations will also continue during each rain event of the 2011/2012 rainy season, with data re-evaluated next summer given the uncertainty of the dioxin performance results (see Section 2.3).

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3.0 POTENTIAL BMP SUBAREA MONITORING PROGRAM

The potential BMP subarea monitoring program was developed following submittal of the BMP Plan, and conducted for the first time during the 2010/2011 rainy season. Section 3.1 presents a detailed summary and evaluation of 2010/2011 rainy season potential BMP subarea monitoring and sampling activities and results, and Section 3.2 presents the results of the potential BMP site ranking analysis.

3.1 2010/2011 RAINY SEASON ACTIVITIES AND RESULTS

Potential BMP subarea monitoring during the 2010/2011 rainy season was initiated during the December 17-22, 2010 rain event following finalization of the 2010/2011 Rainy Season SAP, and consisted of stormwater runoff inspections and sampling at 18 “planned” or “potential” BMP sites and 5 locations identified to monitor stormwater runoff quality from natural undisturbed or “stormwater background” areas. The activities were conducted according to the 2010/2011 Rainy Season SAP (MWH, 2010e), and are summarized below.

3.1.1 Inspection and Sampling Activities

During the 2010/2011 rainy season, 13 potential BMP subarea monitoring samples were collected and analyzed from the 3 locations within the Outfall 008 watershed and 54 potential BMP subarea monitoring samples were collected and analyzed from a total of 19 locations within the Outfall 009 watershed. Additionally, one potential BMP subarea monitoring sample was collected and placed on hold within the Outfall 009 watershed. The sample was placed on hold and not subsequently analyzed because runoff at the sample location contained both rainwater from the current event and rainwater from a previous rain event that was being discharged from a Baker tank. A summary of the number of potential BMP subarea monitoring samples collected during each rain event is presented in Table 1-5. The potential BMP subarea monitoring samples collected during the 2010/2011 rainy season are listed in Table 3-1. The monitoring locations and dates on which potential BMP subarea monitoring samples were collected are shown on Figures 2-1 through 2-7. Graphs of rainfall in inches per hour for the 2010/2011 rain events during which a potential BMP subarea monitoring sample was collected, along with the potential BMP subarea monitoring sampling times, are included in Appendix B.

Potential BMP subarea monitoring samples were not collected from two of the planned locations within the Outfall 009 watershed during the 2010/2011 rainy season because flowing stormwater was not present during inspections. The two locations include the western-most location within the LOX RFI site (LXBMP0001) and the location downgradient of the Ash Pile and Building 515 Sewage Treatment Plant (AP/STP) RFI site (APBMP0001).

Field measurements of potential BMP subarea monitoring samples included turbidity, temperature, pH, and conductivity. Laboratory analysis of potential BMP subarea monitoring samples included total and dissolved metals, dioxins, TSS, particle size distribution (PSD), and turbidity as described in the 2010/2011 Rainy Season SAP (MWH, 2010e). The analytical suite and laboratory method for each sample listed in Table 1-3 was performed.

3.1.2 Sample Results

Potential BMP subarea monitoring analytical results, including field measurements, and rainfall event measurements from the 2010/2011 rainy season are presented in Tables 3-2 and 3-3. Laboratory reports for potential BMP subarea monitoring samples are included in Appendix C.

Potential BMP subarea monitoring sample results for NPDES COCs were compared to NPDES outfall results to assess whether there is a general pattern of water quality changes as runoff travels down the watersheds and to provide a context for evaluating possible contributions to NPDES samples at the outfalls. To support this evaluation, time-series charts showing potential BMP subarea, stormwater background, and NPDES monitoring results versus sample collection date are provided in Appendix G-1 for each NPDES COC detected within each outfall. Additionally, to assess the general understanding that the NPDES COCs are associated with soils and are mobilized by stormwater runoff when these soils are eroded and suspended in the water column, correlation charts are provided in Appendix G-2 showing potential BMP subarea monitoring results and stormwater background sample results for NPDES COCs versus TSS are provided for each NPDES COC detected within each outfall. These charts are included in Appendix G. Stormwater background monitoring locations are located in the Outfall 009 watershed (see Table 1-4) and are therefore included only in the Outfall 009 charts described above. The charts do not include results for ISRA or CM locations that were included in the complete stormwater background datasets utilized in the Expert Panel's BMP site ranking analysis presented in Section 3.2.

3.1.2.1 Outfall 008 Watershed Sample Results

Below is a summary of the Outfall 008 potential BMP subarea monitoring and NPDES sample results for the Outfall 008 NPDES COCs, and general trends observed in the results. The results for other analytes (e.g., dissolved metals) in potential BMP subarea monitoring samples were or will be used for stormwater treatability assessment, BMP design, metal particulate strength calculations (as described in the BMP site ranking analysis memorandum included in Appendix H), and future BMP site ranking analyses.

- Lead, copper, and dioxins were not detected in potential BMP subarea monitoring or Outfall 008 NPDES samples at concentrations above the NPDES limit during the 2010/2011 rainy season with the exception of lead in one Outfall 008 NPDES sample collected during a rain event early in the rainy season (December).
- Potential BMP subarea monitoring samples collected to date show positive correlations between copper and lead concentrations and TSS concentrations, confirming the general understanding that these COCs are associated with soil particulate matter. A correlation between dioxins and TSS concentrations is not possible because all dioxin results were below the detection limit.
- Outfall 008 NPDES results for lead, copper, and TSS are greater than potential BMP subarea monitoring samples during all sampling events, indicating that contributions of these COCs may be from natural channel bed materials (soils and associated minerals) being re-suspended in the drainage between the upland subareas and the downstream outfall location where concentrated water velocities and shear stresses are greater and/or from dirt roads. The relationship of dioxins concentrations between potential BMP subarea monitoring and Outfall 008 NPDES samples is not discernable due to the high number of non-detect results.

3.1.2.2 Outfall 009 Watershed Sample Results

Below is a summary of the Outfall 009 potential BMP subarea monitoring, stormwater background, and NPDES sample results for the Outfall 009 NPDES COCs, and general trends observed in the results. The results for other analytes (e.g., dissolved metals) in potential BMP subarea monitoring samples were or will be used for stormwater treatability assessment, BMP design, metal particulate strength calculations (as described in the BMP site ranking analysis memorandum included in Appendix H), and future BMP site ranking analyses..

- Cadmium and mercury were not detected in potential BMP subarea monitoring or Outfall 009 NPDES samples at concentrations above the NPDES limit during the 2010/2011 rainy season (excludes two mercury J-flagged results). Copper, lead, and/or dioxins were detected above the NPDES limit in 13 potential BMP subarea monitoring samples collected at the B-1 culvert inlet, the B-1 paved roadside ditch, the Helipad spillway, the lower parking lot sheetflow, the lower parking lot 24-inch stormdrain, and LOX dirt road sheetflow, one stormwater background samples collected upgradient of CM-3, and 2 Outfall 009 NPDES samples during the 2010/2011 rainy season. In general, the subarea monitoring sites that receive runoff from primarily paved surfaces had the

highest COC concentrations⁹, a finding that generally supports the benefits of Boeing's ongoing asphalt removal/demolition projects.

- Potential BMP subarea monitoring and stormwater background samples collected to date show positive correlations between copper and lead concentrations and TSS concentrations, confirming the general understanding that these COCs are associated with soil particulate matter. Correlations between cadmium, mercury, and dioxins concentrations and TSS concentrations were limited by the high number of non-detect results.
- Potential BMP subarea monitoring and Outfall 009 NPDES concentrations for lead, copper, and TSS are generally greater than stormwater background samples for all sampling events, supporting the general characterization of these sites as potential locations for stormwater quality control.
- The relationship of Outfall 009 COCs between potential BMP subarea monitoring and Outfall 009 NPDES results is not consistent based on available data (i.e., neither the performance monitoring or the outfall sample results are consistently greater than the other). These results may indicate that a consistent relationship is not apparent due to data variability, or they may indicate that the BMP subareas may occasionally contribute to concentrations observed at the outfall.

3.2 POTENTIAL BMP RANKING RESULTS AND RECOMMENDATIONS

The Expert Panel ranked the potential BMP sites to prioritize the locations based on water quality considerations following the approach summarized in Section 1.3.3. The Expert Panel's ranking analysis memorandum (Geosyntec and Expert Panel, 2011c) is included as Appendix H. The potential BMP sites were ranked based on the multi-constituent score, with the top-ranked sites recommended for consideration for new or enhanced stormwater control placement.

Site Specific Evaluation of Top-Ranked Sites

Based on the analysis results, the following eight potential BMP locations are identified as the top-ranked subareas out of the 19 total sites that were considered for this analysis. These top-ranked sites have multi-constituent scores ranging from 0.25 to 0.66. The identified sites

⁹ As stated previously, stormwater runoff from asphalt pavement may contribute metals and dioxins concentrations that are above background due to: (1) regional atmospheric deposition (which over time builds up and more effectively washes off pavement during rain events unlike open ground areas where stormwater runoff may partially infiltrate or be sequestered by plants), (2) contributions from the asphalt emulsion and/or pavement sealant themselves, and/or (3) contributions from vehicles (e.g., brake dust, oil leaks, and exhaust particulates).

include those that were ranked first and second for each of the constituent categories (metals, dioxins, or TSS), all sites that had detections of the 2,3,7,8-tetrachlorobenzo-p-dioxin (TCDD) dioxin congener (at low, DNQ-estimated quantities), five of the eight sites where both the 95th percentile background limits and permit limits were exceeded, seven of the top seven ranked sites for metals, eight of the top nine ranked sites for dioxins, and four of the top five ranked sites for TSS. This list also includes all of the subareas that will receive runoff treatment by two new treatment controls – the lower parking lot biofilter and the B-1 culvert modification – that Boeing has already planned and designed in advance of this monitoring data collection and analysis effort, and that are scheduled for construction during Summer/Fall 2011. This list is followed by the Panel’s new BMP recommendations for implementation.

1. **EV BMP0002** (Helipad spillway, Figure 2-6): This monitoring site reflects sheetflow from the approximately 4 acre, fully paved helipad area, and includes no areas of surface soil contamination, such as those identified by the ISRA program. This area also represents a significant source of runoff to Outfall 009 during frequent small rain events given its large impervious area and direct connection to the outfall via a slope drain. This site was ranked first based on the multi-constituent score of 0.66. This site was ranked sixth for metals and first for dioxins, and exceeded both the 95th percentile background limits and the permit limits. The Expert Panel recommends new BMP actions to address runoff from this subarea.
2. **IL BMP0001** (lower parking lot 24-inch stormdrain outlet below Building 436, Figure 2 2), tied for 2nd with LPBMP0001: This monitoring site reflects stormdrain flows from a 23 acre, 35% impervious subarea, and includes undeveloped hillsides, parking lot, rooftop, and paved roadway surfaces. It does not include exposed areas of COC surface soil contamination, such as those identified by the ISRA program. This site is ranked second overall, tied with the soil stockpile subarea, based on the multi-constituent score of 0.5. This site was ranked first for metals (tied with soil stockpile, B-1 culvert inlet, and Area I landfill) and second for dioxins (tied with soil stockpile and CM-1 upgradient west), and exceeded both the 95th percentile background limits and the permit limits. This subarea will soon have treatment of low flows as part of the planned stockpile sediment basin and biofilter, which is a multi-stage treatment system with specially-selected filter media. The low flow diversion is currently estimated to capture and treat, on average, 21% of the runoff volume from this subarea, based on long-term continuous modeling and the existing 90% design plans. Current SSFL demolition plans will remove Building 436 and the adjacent parking lot in 2013 (a total impervious area of approximately 1 acre), which will reduce runoff volumes to this stormdrain and increase the percent capture of the low flow diversion. Given the planned demolition activities and installation of the biofilter at the downstream soil stockpile area, the Expert Panel does not recommend additional actions to address runoff from this subarea at this time. As only two samples were collected from this monitoring site during the 2010/2011 rainy season, additional sampling during the 2011/2012 rainy season will provide a greater understanding of stormwater quality for this subarea.

3. **LPBMP001** (soil stockpile sheetflow, Figure 2-2), tied for 2nd with ILBMP0001: This monitoring site reflects sheetflow from the 5 acre, fully paved soil stockpile area (or lower parking lot), and currently includes no areas of surface soil contamination but may be used in the future to manage stockpiled soils generated from the SSFL remediation program. As a result, it may have the continued potential for discharge of constituents. This site is ranked second overall, tied with lower parking lot stormdrain, based on the multi-constituent score of 0.5. The stockpile area was ranked first for metals (tied with lower parking lot stormdrain, B-1 culvert inlet, and Area I landfill) and second for dioxins (tied with lower parking lot stormdrain and CM-1 upgradient west). The Plan had previously recommended a multi-stage treatment control (sediment basin followed by biofilter) for this 5 acre area that is sized to the site specific design storm, or 90% runoff volume capture, and installation is planned for 2011. Furthermore, construction SWPPP erosion and sediment control practices will be implemented during future soil stockpiling activities, and 1.8 acres of adjacent asphalt (not in this drainage area) will be removed on Boeing and Sage Ranch property in 2011. The Expert Panel recommends no new actions to address runoff from this subarea. Only two samples were collected from this monitoring site during the 2010/2011 rainy season and additional sampling during the 2011/2012 rainy season will allow for an evaluation of the effectiveness of the construction of the multi-stage treatment system.
4. **A2SW0001** (Expendable Launch Vehicle [ELV] road runoff/CM-1 upgradient west, Figure 2-6): This monitoring site reflects sheetflow from an approximately 13 acre area, which includes ELV ISRA areas, a completed Area II ISRA area, parking lot, rooftop, and paved roadway surfaces. This site was ranked fourth overall with a multi-constituent score of 0.45. This site was ranked fifth for metals, second for dioxins (tied with lower parking lot stormdrain and soil stockpile, and included the J-flagged detection of 2,3,7,8-TCDD), second for TSS, and exceeded both the 95th percentile background limits and the permit limits. This site had the highest observed TCDD TEQ concentrations of those included in this BMP subarea ranking analysis. CM-1 is an existing culvert modification that treats runoff from a 41 acre undisturbed subwatershed, as well as runoff from this subarea due to an existing broken asphalt channel below the ELV hillside that is diverting runoff toward the road and then toward CM-1. The completed ISRA area is now covered with hydroseed mulch, straw wattle, and rip rap. ISRA removal activities are planned for the ELV area after 2011. The Expert Panel also recommends new actions to address runoff from this subarea.
5. **LXBMP0002** (LOX mid, Figure 2-5): This monitoring site reflects sheetflow, collected along a LOX area dirt road, from an approximately 1.5 acre compacted pervious drainage area, and includes LOX ISRA areas. This site was ranked fifth overall with a multi-constituent score of 0.31. LOX was ranked seventh for metals and sixth for dioxins. ISRA removal activities are planned for this subarea after 2011. The Expert Panel recommends new actions to address runoff from this subarea. As only two samples were collected from this monitoring site during the 2010/2011 rainy season, additional sampling during the 2011/2012 rainy season will provide a greater understanding of

stormwater quality for this subarea. The Expert Panel recommends new BMP actions to address runoff from this subarea.

6. **B1BMP0001** (B-1 culvert inlet, Figure 2-2): This monitoring site reflects runoff collected at the B-1 culvert inlet from an approximately 4.4 acre drainage area, and is located near the SSFL entrance. This site is ranked sixth overall with a multi-constituent score of 0.30. The B-1 culvert inlet was ranked first for metals (tied with lower parking lot stormdrain, soil stockpile, and Area I landfill), eighth for dioxins, and first for TSS. The B-1 ISRA areas were completed in 2011. The Expert Panel previously recommended two new treatment controls at this site which are scheduled to be completed in 2011/2012 rainy season – the B-1 sediment basin and a culvert inlet filter. Furthermore, recent hillside erosion controls and vegetation growth will reduce sediment loading from the exposed slopes immediately surrounding this monitoring site. Therefore, the Expert Panel recommends no new actions to address runoff from this subarea.
7. **A1BMP0001** (A1LF, Figure 2-4): This monitoring site reflects runoff collected in a channel below the 1.2 acre Area I landfill drainage area, and includes the A1LF ISRA area. This site is ranked seventh overall with a multi-constituent score of 0.28. A1BMP0001 was ranked first for metals (tied with lower parking lot stormdrain, soil stockpile, and B-1 culvert inlet) and ninth for dioxins, and exceeded both the 95th percentile background limits and the permit limits (in this case for TCDD TEQ, which includes congener DNQ results for the purposes of this analysis). ISRA activities (e.g., excavation and offsite disposal, capping with a clay cap, or constructing diversion and collection structures) are planned for the A1LF after 2011. Runoff from this area is currently treated by CM-9 (noting however that runoff from the southern portion of A1LF drains towards Outfall 011 where there is an active treatment system in place). An adjacent 1.5 acre parking lot is also planned for removal in 2011, and this will reduce runoff to CM-9 thereby increasing the percent of runoff volume that is treated from the landfill. Also, as part of the asphalt removal project, a BMP such as a vegetated swale may be constructed; if that work proceeds, it may be designed to also capture a portion of runoff from the top of the landfill and route it toward Outfall 011. The lower or hillside portion of the landfill is currently well vegetated or is occupied by an access road that is covered with erosion controls (hydroseed mulch and straw waddles). The Expert Panel also recommends new actions to address runoff from this subarea, although it should be noted that no NPDES permit limits were exceeded in any of the five grab samples that were collected from this monitoring location during the 2010/2011 rainy season based on NPDES compliance reporting procedures (i.e., TCDD TEQ excluding congener DNQ results).
8. **B1SW0011** (B-1 paved roadside ditch, Figure 2-2): This monitoring site reflects paved road runoff from a very small drainage area near the SSFL entrance, and includes no areas of surface soil contamination, such as those identified by the ISRA program. This site is ranked eighth overall with a multi-constituent score of 0.25. The B-1 ditch was ranked 15th for metals, second for dioxins (including the J-flagged detection of

2,3,7,8-TCDD), and exceeded both the 95th percentile background limits and the permit limits. This subarea will soon have a new treatment control (B-1 culvert inlet filter). Runoff from this area will be treated by the B-1 culvert inlet filter, which is to be completed in 2011. The Expert Panel recommends no new actions to address runoff from this subarea.

New BMP Recommendations

Based on the above ranking results, and utilizing best professional judgment (including consideration of information on planned ISRA, BMP, and demolition measures), the following new BMPs are recommended by the Expert Panel. The general locations of these BMPs are shown on Figure 3-1 and 3-2, with additional detail on these BMP concepts and the implementation schedule will be provided in the BMP Work Plan Addendum, submitted to the RWQCB in September 2011. As the locations fall on both NASA and Boeing property, landowner coordination and authorization will be required in order to implement these recommendations.

1. **Helipad (Figure 3-2)** – The Expert Panel recommends sheetflow runoff collection and storage followed by treatment or disposal. Treatment may consist of sedimentation basins followed by flow through filtration media or collection and storage of stormwater and subsequent treatment prior to discharge. Alternatively, removal of the asphalt in this area could both reduce runoff quantity and improve runoff quality (i.e., reduce COC concentrations). If asphalt removal is contemplated as part of this effort, the Expert Panel recommends that it be combined with fine grading to create depressional areas (to promote infiltration and evapotranspiration) and rigorous application of erosion control and revegetation measures, as well as removal of any surficial soils that are above ISRA criteria for the Outfall 009 NPDES COCs that may become exposed following pavement removal.
2. **ELV/CM-1 (Figure 3-2)** – The Expert Panel recommends ISRA removal at ELV (including robust erosion controls), reconstruction of existing drainage ditch below ELV, and installation of a new culvert inlet media filter near Helipad Road. The Expert Panel also recommends continued inspection and maintenance (removal of accumulated sediment) of CM-1 and of the adjacent ISRA erosion controls.
3. **LOX (Figure 3-2)** (middle sampling location) – The Expert Panel recommends placement of a sandbag berm along the northern bank of the Northern Drainage channel to reduce bank erosion and encourage temporary ponding of this sheetflow runoff from LOX. ISRA removal is planned to occur here after 2011, and the Expert Panel recommends that this be implemented without backfill to leave distributed areas for infiltration for runoff control until final remediation of the LOX RFI area.
4. **A1LF (Figure 3-1)** – The Expert Panel understands that asphalt removal may occur in this subarea and further recommends continued inspection and maintenance (removal of

accumulated sediment) of CM-9, channel armoring erosion control in the drainage channel at the base of the hillside, and potentially rerouting and/or treating sheetflow runoff from the top of the landfill.

3.3 POTENTIAL BMP MONITORING PROGRAM RECOMMENDATIONS

Based on the data collected for the potential BMP monitoring program during the initial rainy season, there is only one change to the program. Sample location LXBMP0003, which currently monitors the same drainage as BGBMP0003, will be discontinued and a new sample location will be established in the vicinity as LXBMP0003 that will monitor runoff from the LOX RFI area that flows along the dirt road.

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4.0 UPDATED MILESTONES SCHEDULE

The milestone schedule presented in the BMP Plan has been updated, and is provided below. The schedule accounts for phasing of implementation to allow completion of ongoing work within the Outfalls 008 and 009 watersheds, including ISRA and Northern Drainage cleanup.

2011:

August – December 2011	Continue planning, designing, permitting, and implementing where feasible and practicable Short Term BMP Implementation Activities listed in 1.3.1 that can be completed in 2011.
August 2011	Hold a public meeting during which the Expert Panel presents an update on the BMP program.
September 2011	Submit BMP Plan Addendum that identifies new stormwater controls (for subsequent design) and proposed implementation schedule.
2011/2012 Rainy Season	Collect stormwater samples.

2012:

Spring 2012	Complete required archeological and/or biological surveys for proposed work areas, grading plans and engineering design calculations, as necessary. Submit permitting packages or permitting amendments for potential implementation areas within drainages. Prepare supporting plans for implementation, including Soil Management Plan, Traffic Management Plan, and Health and Safety Plan, as necessary.
Summer – Fall 2012	Implement BMP Work Plan field work and restoration activities following approval by RWQCB, approval of necessary permits, contractor selection and completion of required studies/surveys. Work may be phased based on the scope of work identified in the September 2011 BMP Plan Addendum.

Fall 2012	Submit an evaluation of monitoring results identifying locations, conceptual design(s), and implementation schedule for new recommended BMPs.
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2012/2013 Rainy Season	Collect stormwater samples.
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2013:

Summer 2013	Submit annual report and recommendation of BMP upgrades as necessary.
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Summer – Fall 2013	Implement additional BMP Work Plan field work and restoration activities following approval by RWQCB, approval of necessary permits, contractor selection and completion of required studies/surveys.
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Fall 2013	Submit an evaluation of monitoring results identifying locations, conceptual design(s), and implementation schedule for new recommended BMPs.
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2013/2014 Rainy Season	Collect stormwater samples.
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2014:

Fall 2014	Submit BMP Upgrade Plan that provides a review of performance monitoring results and upgrades to the BMP if required.
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As described in the BMP Plan, following ISRA implementation, Northern Drainage activities, and BMPs/treatment control implementation, effectiveness of these measures will be evaluated primarily by the results of stormwater samples collected at Outfalls 008 and 009, supplemented by ISRA performance data, or any subarea data to be collected as part of this BMP Plan. These sampling results will be reviewed annually to determine whether additional upgrades may be warranted. If required, a BMP Upgrade Plan Addendum will be submitted for RWQCB review and approval.

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TABLES

Table 1-1
Summary of NPDES Permit Limit Exceedances - Outfall 008
(Page 1 of 1)

Table 1-1

Analyte	Units	2010 Compliance Limit	Sample Date	Result	Data Type
Copper	µg/L	14.0	2/18/2005	15	Monitoring-only
Lead	µg/L	5.2	10/20/2004	9.8	Monitoring-only
Lead	µg/L	5.2	10/27/2004	9	Monitoring-only
Lead	µg/L	5.2	12/28/2004	6.4	Monitoring-only
Lead	µg/L	5.2	2/18/2005	13	Monitoring-only
Lead	µg/L	5.2	10/18/2005	120	Monitoring-only
Lead	µg/L	5.2	1/1/2006	20	Monitoring-only
Lead	µg/L	5.2	4/15/2006	18	Compliance
Lead	µg/L	5.2	1/25/2008	6.3	Benchmark
Lead	µg/L	5.2	1/18/2010	7.9	Benchmark
Lead	µg/L	5.2	2/5/2010	10	Benchmark
Lead	µg/L	5.2	2/28/2010	7.0	Benchmark
Lead	µg/L	5.2	12/19/2010	6.7	Compliance
Dioxins / TCDD TEQ	µg/L	2.80E-08	2/18/2005	4.46E-08	Monitoring-only
Dioxins / TCDD TEQ	µg/L	2.80E-08	2/28/2006	3.19E-07	Monitoring-only
Dioxins / TCDD TEQ	µg/L	2.80E-08	1/18/2010	2.35E-06	Benchmark

Notes:

NPDES Permit exceedances are sample results that are greater than the NPDES limit and were collected after the discharge limit was established and before limit was updated to a benchmark (performance based) limit for the outfalls (compliance data above).

Dioxins / TCDD TEQ - A sum of 17 dioxin / furan congener results adjusted for toxicity. The TEQ is calculated for samples collected before July 2010 by multiplying the result of each congener by its respective World Health Organization's (1998 WHO's) toxic equivalency factor (TEF), which is based on the relative potency of the congener to cause a toxic response relative to 2,3,7,8-TCDD. Samples collected after July 2010 are also multiplied by the Great lakes water quality initiative bioaccumulation equivalency factor (BEF), which correspond to the differences in biological uptake from the water column for the various dioxin congeners. TCDD TEQ values do not include laboratory data not quantified (DNQ) as specified in the NPDES permit.

TCDD TEQ - tetrachlorobenzo-p-dioxin toxic equivalent (normalized to 2,3,7,8-TCDD)

Table 1-2
Summary of NPDES Permit Limit Exceedances - Outfall 009
(Page 1 of 2)

Table 1-2

Analyte	Units	2010 Compliance Limit	Sample Date	Result	Data Type
Cadmium	µg/L	4.0	10/17/2005	9.2	Monitoring-only
Copper	µg/L	14	10/17/2005	39	Monitoring-only
Copper	µg/L	14	2/18/2006	22	Monitoring-only
Copper	µg/L	14	4/4/2006	26	Compliance
Lead	µg/L	5.2	12/28/2004	11	Monitoring-only
Lead	µg/L	5.2	2/18/2005	10	Monitoring-only
Lead	µg/L	5.2	10/17/2005	260	Monitoring-only
Lead	µg/L	5.2	2/18/2006	33	Monitoring-only
Lead	µg/L	5.2	4/4/2006	64	Compliance
Lead	µg/L	5.2	9/22/2007	8.6	Compliance
Lead	µg/L	5.2	2/3/2008	6.0	Benchmark
Lead	µg/L	5.2	12/15/2008	19	Benchmark
Lead	µg/L	5.2	2/6/2009	7.5	Benchmark
Lead	µg/L	5.2	2/13/2009	20	Benchmark
Lead	µg/L	5.2	12/7/2009	5.7	Benchmark
Lead	µg/L	5.2	1/19/2010	9.3	Benchmark
Lead	µg/L	5.2	2/28/2010	8.9	Benchmark
Lead	µg/L	5.2	10/6/2010	11	Compliance
Mercury	µg/L	0.13	1/4/2005	0.20	Monitoring-only
Mercury	µg/L	0.13	10/17/2005	0.21	Monitoring-only
Oil & Grease	µg/L	15	1/11/2005	16	Compliance
pH	pH units	6.5 - 8.5	10/17/2005	8.80	Compliance
Dioxins / TCDD TEQ	µg/L	2.80E-08	1/4/2005	1.72E-06	Monitoring-only
Dioxins / TCDD TEQ	µg/L	2.80E-08	2/18/2005	5.20E-08	Monitoring-only
Dioxins / TCDD TEQ	µg/L	2.80E-08	10/17/2005	9.10E-04	Monitoring-only
Dioxins / TCDD TEQ	µg/L	2.80E-08	11/9/2005	6.14E-07	Monitoring-only
Dioxins / TCDD TEQ	µg/L	2.80E-08	2/18/2006	1.56E-05	Monitoring-only
Dioxins / TCDD TEQ	µg/L	2.80E-08	4/4/2006	1.77E-05	Compliance
Dioxins / TCDD TEQ	µg/L	2.80E-08	2/19/2007	7.64E-07	Compliance
Dioxins / TCDD TEQ	µg/L	2.80E-08	9/22/2007	3.13E-06	Compliance
Dioxins / TCDD TEQ	µg/L	2.80E-08	2/3/2008	3.58E-07	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	11/26/2008	3.99E-07	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	12/15/2008	1.83E-06	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	2/6/2009	9.55E-07	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	2/13/2009	1.22E-05	Benchmark

Table 1-2
Summary of NPDES Permit Limit Exceedances - Outfall 009
(Page 2 of 2)

Table 1-2

Analyte	Units	2010 Compliance Limit	Sample Date	Result	Data Type
Dioxins / TCDD TEQ	µg/L	2.80E-08	10/14/2009	1.60E-06	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	12/7/2009	1.10E-07	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	1/19/2010	3.43E-06	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	2/5/2010	7.21E-07	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	2/28/2010	1.09E-06	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	3/7/2010	2.90E-08	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	4/5/2010	1.58E-06	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	4/12/2010	1.47E-06	Benchmark
Dioxins / TCDD TEQ	µg/L	2.80E-08	10/6/2010	3.90E-08	Compliance
Dioxins / TCDD TEQ	µg/L	2.80E-08	3/20/2011	8.26E-08	Compliance

Notes:

NPDES Permit exceedances are sample results that are greater than the NPDES limit and were collected after the discharge limit was established and before limit was updated to a benchmark (performance based) limit for the outfalls (compliance data above).

Dioxins / TCDD TEQ - A sum of 17 dioxin / furan congener results adjusted for toxicity. The TEQ is calculated for samples collected before July 2010 by multiplying the result of each congener by its respective World Health Organization's (1998 WHO's) toxic equivalency factor (TEF), which is based on the relative potency of the congener to cause a toxic response relative to 2,3,7,8-TCDD. Samples collected after July 2010 are also multiplied by the Great lakes water quality initiative bioaccumulation equivalency factor (BEF), which correspond to the differences in biological uptake from the water column for the various dioxin congeners. TCDD TEQ values do not include laboratory data not quantified (DNQ) as specified in the NPDES permit.

TCDD TEQ - tetrachlorobenzo-p-dioxin toxic equivalent (normalized to 2,3,7,8-TCDD)

Table 1-3
ISRA Performance Monitoring Sampling Summary
2010-2011 Rainy Season
Page 1 of 2

Table 1-3

Object ID	Location	Purpose	Areas Monitored	Notes	Cadmium, total by 200.8	Copper, total by 200.8	Lead, total by 200.8	Mercury, total by 245.1	Dioxin by 1613	Total Suspended Solids by 2540
Outfall 008 Watershed										
HZSW0003	Happy Valley	DG Primary	CYN-1, DRG-1	Primary Downgradient, CYN-1, DRG-1		X	X		X	X
HZSW0004	Happy Valley	DG Secondary	DRG-1	Secondary Downgradient, DRG-1					H	H
HZSW0005	Happy Valley	UG	DRG-1	Upgradient, DRG-1					H	H
HZSW0006	Happy Valley	UG	CYN-1, DRG-1	Upgradient, CYN-1, DRG-1		X	X		X	X
HZSW0007	Happy Valley	DG Primary	all HVS	Primary Downgradient (all HVS)		X	X		X	X
HZSW0008	Happy Valley	UG	HVS-1	Upgradient, HVS-1			X		X	X
HZSW0009	Happy Valley	DG Secondary	HVS-1	Secondary Downgradient, HVS-1			H		H	H
HZSW0010	Happy Valley	DG Secondary	HVS-3, -4	Secondary Downgradient, HVS-3, -4		H			H	H
HZSW0011	Happy Valley	UG	HVS-3	Upgradient, HVS-3		X			X	X
HZSW0012	Happy Valley	UG	HVS-2C	Upgradient, HVS-2C			X			X
HZSW0013	Happy Valley	DG Secondary	HVS-2C	Secondary Downgradient, HVS-2C			H			H
HZSW0014	Happy Valley	UG	HVS-2B-1, -2B-2	Upgradient, HVS-2B-1, HVS-2B-2		X	X			X
HZSW0015	Happy Valley	DG Secondary	HVS-2B-1, -2D	Secondary Downgradient, HVS-2B-1, -2D		H	H		H	H
HZSW0016	Happy Valley	DG Secondary	HVS-2B-1, -2	Secondary Downgradient, HVS-2B-1, -2		H	H			H
HZSW0017 *	Happy Valley	UG	HVS-2A, -2D	Upgradient, HVS-2A, HVS-2D			X		X	X
HZSW0018	Happy Valley	DG Secondary	HVS-2A	Secondary Downgradient, HVS-2A			H			H
HZSW0019	Happy Valley	DG Secondary	CYN-1	Secondary Downgradient, CYN-1		H	H			H
HZSW0020 *	Happy Valley	UG	HVS-2A, -2D	Upgradient, HVS-2A, HVS-2D			X		X	X
Outfall 009 Watershed										
A1SW0002	CM-8	UG	CM-8	Upgradient, CM-8			X			X
A1SW0003	CM-8	DG Primary	CM-8	Primary Downgradient, CM-8			X			X
A1SW0004	A1LF/CM-9	UG	A1LF/CM-9	Upgradient, CM-9	X	X	X	X	X	X
A1SW0005	A1LF/CM-9	DG Primary	A1LF/CM-9	Primary Downgradient, CM-9	X	X	X	X	X	X
A1SW0006	CM-11	UG	CM-11	Upgradient, CM-11					X	X
A1SW0007	CM-11	DG Primary	CM-11	Primary Downgradient, CM-11					X	X
A2SW0001	A2LF	UG	A2LF-3/CM-1	Upgradient west, A2LF-3/CM-1			X		X	X
A2SW0006 *	A2LF	UG	A2LF-3/CM-1	Upgradient east, A2LF-3/CM-1			X		X	X
A2SW0007 *	A2LF	UG	A2LF-3/CM-1	Upgradient east, A2LF-3/CM-1			X		X	X
A2SW0002	A2LF	DG Primary	A2LF-3/CM-1	Primary Downgradient, A2LF-3/CM-1			X		X	X
A2SW0003	A2LF	UG	A2LF-1	Upgradient, A2LF-1					X	X
A2SW0004	A2LF	DG Primary	A2LF-1	Primary Downgradient, A2LF-1					X	X
APSW0001	AP/STP	UG	AP/STP-1A	Upgradient, AP/STP-1A			X		X	X
APSW0002	AP/STP	DG Primary	AP/STP-1A	Primary Downgradient, AP/STP-1A			X		X	X
APSW0003	AP/STP	UG	AP/STP-1D	Upgradient, AP/STP-1D					X	X

Table 1-3
ISRA Performance Monitoring Sampling Summary
2010-2011 Rainy Season
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Table 1-3

Object ID	Location	Purpose	Areas Monitored	Notes	Cadmium, total by 200.8	Copper, total by 200.8	Lead, total by 200.8	Mercury, total by 245.1	Dioxin by 1613	Total Suspended Solids by 2540
APSW0004	AP/STP	DG Primary	AP/STP-1D	Primary Downgradient, AP/STP-1D					X	X
APSW0005	AP/STP	UG	AP/STP-1F	Upgradient, AP/STP-1F					X	X
APSW0006	AP/STP	DG Primary	AP/STP-1F	Primary Downgradient, AP/STP-1F					X	X
B1SW0002	B-1	UG	B1-2	Upgradient North, B1-2	X	X	X	X	X	X
B1SW0003	B-1	UG	B1-1B, -1C, -1D, -2	Upgradient, B1-1B, -1C, -1D, -2	X	X	X	X	X	X
B1SW0004	B-1	DG Secondary	B1-1D	Secondary Downgradient, B1-1D				H	H	H
B1SW0005	B-1	DG Secondary	B1-1D	Secondary Downgradient, B1-1D				H	H	H
B1SW0006	B-1	DG Secondary	B1-1B, -1C	Secondary Downgradient, B1-1B, -1C					H	H
B1SW0007	B-1	DG Secondary	B1-1B, -1C	Secondary Downgradient, B1-1B, -1C					H	H
B1SW0008	B-1	UG	B1-1A	Upgradient, B1-1A	X				X	X
B1SW0009	B-1	DG Secondary	B1-1A	Secondary Downgradient, B1-1A	H				H	H
B1SW0010	B-1	DG Primary	all B-1	Primary Downgradient (all B-1)	X	X	X	X	X	X
B1SW0011	B-1	DG Primary	B1-2	Upgradient South, B1-2	X	X	X	X	X	X
B1SW0012 *	B-1	DG Primary	B1-2	Upgradient North, B1-2	X	X	X	X	X	X
ILSW0001	IEL	UG	IEL-1	Upgradient, IEL-1		X		X		X
ILSW0002	IEL	DG Primary	IEL-1	Primary Downgradient, IEL-1		X		X		X
LFSW0001	CTLI	UG	CTLI-1A, -1B	Upgradient, CTLI-1A, -1B		X	X		X	X
LFSW0002	CTLI	DG Primary	CTLI-1A, -1B	Primary Downgradient, CTLI-1A, -1B		X	X		X	X
LXSW0001 *	CM-3	Background	CM-3	Upgradient, CM-3	X	X	X	X	X	X
LXSW0002	CM-3	Background	CM-3	Primary Downgradient, CM-3	X	X	X	X	X	X
LXSW0003 *	CM-3	Background	CM-3	Upgradient, CM-3	X	X	X	X	X	X

Abbreviations:

DG - Downgradient

H = Collect and place on Hold

PM - ISRA Performance monitoring

UG - Upgradient

X = Collect and Analyze

Notes:

* Sample location added or removed based on field conditions observed during the 2010/2011 rainy season as described below:

1) Sample location HZSW0017 was sited below a silt fence in disturbed soil (planting area); the sample location was moved above silt fence and named HZSW0020 during the 12/22/2010 sampling event.

2) Sample location A2SW0006 was observed to be in ponded water during the 12/22/10 sampling event, and the sample location was temporarily moved upgradient to collect flowing water and named A2SW0007; per the Expert Panel's recommendation, sample location permanently moved to A2SW0007 during the 2/26/2011 sampling event.

3) Sample location LXSW0001 was observed to be in ponded water during the 12/22/10 sampling event, and the sample location was temporarily moved upgradient to collect flowing water and named LXSW0003; per the Expert Panel's recommendation, sample location permanently moved to LXSW0003 during the 3/21/2011 sampling event.

4) Sample B1SW0012 was added to monitor discharge from a culvert outlet.

**Table 1-4
Treatment BMP Monitoring Sampling Summary
2010-2011 Rainy Season
Page 1 of 2**

Object ID	Location	Purpose	Areas Monitored	Notes	Total Recoverable Metals by 200.7/200.8		Total Dissolved Metals by 200.7/200.8		Total Suspended Solids by 2540	Particle Size Distribution (field measurement)	Particle Size Distribution by ASTM D422	Turbidity
Outfall 008 Watershed												
HZBMP0001	Happy Valley	Potential BMP Location	HVS	Co-located with HZSW0007	X	X	P	P	X	X	X	
HZBMP0002	Happy Valley	Potential BMP Location	DRG & CYN	Co-located with HZSW0004	X	X	X	P	X	X	X	
HZBMP0003	Happy Valley	Potential BMP Location	DRG & CYN	Co-located with HZSW0003	X	X	P	P	X	X	X	
Outfall 009 Watershed												
A1BMP0001	A1LF	Planned BMP Location	A1LF	Tributary drainage	X	X	X	X	X	X	X	
A2BMP0001	A2LF	Potential BMP Location	A2LF	Sheetflow upgradient of dirt road	X	X	X	X	X	X	X	
A2BMP0002	A2LF	Potential BMP Location	A2LF	Sheetflow upgradient of dirt road	X	X	X	X	X	X	X	
APBMP0001	Ash Pile	Planned BMP Location	Ash Pile, STP	Culvert Inlet	X	X	X	X	X	X	X	
B1BMP0001	B-1	Planned BMP Location	B-1, Entrance Road	Culvert Inlet; co-located with B1SW0010	X	X	P	P	X	X	X	
B1BMP0002	B-1	Potential BMP Location	B-1, Parking Lot	Culvert Inlet	X	X	X	X	X	X	X	
BGBMP0001 *	UG CM-1	Background	SE CM-1 subarea	Co-located with A2SW0007	X	X	P	P	X	X	X	
BGBMP0002	UG CM-3	Background	CM-3 subarea	Co-located with LXSW0003	X	X	P	P	X	X	X	
BGBMP0003 *	Sage Ranch	Background	Sage Ranch	Tributary drainage east of LOX	X	X	X	X	X	X	X	
BGBMP0004	Sage Ranch	Background	Sage Ranch	Tributary drainage east of LOX	X	X	X	X	X	X	X	
BGBMP0005	Sage Ranch	Background	Sage Ranch	Culvert Inlet north of B-1	X	X	X	X	X	X	X	
BGBMP0006 *	UG CM-1	Background	SE CM-1 subarea	Co-located with A2SW0006	X	X	P	P	X	X	X	
BGBMP0007 *	UG CM-3	Background	CM-3 subarea	Co-located with LXSW0001	X	X	P	P	X	X	X	
EVBMP0001	ELV	Planned BMP Location	ELV	Culvert Inlet at corner of Helipad Road	X	X	X	X	X	X	X	
EVBMP0002	ELV	Potential BMP Location	Helipad	Spillway	X	X	X	X	X	X	X	
ILBMP0001	Lower Parking Lot	Potential BMP Location	IEL	Spillway Chute	X	X	X	X	X	X	X	
ILBMP0002	IEL	Potential BMP Location	IEL, Area II Road	Road Culvert at CM-9	X	X	X	X	X	X	X	
ILBMP0003	A1LF	Potential BMP Location	IEL, Parking Lot	Tributary drainage	X	X	X	X	X	X	X	
LPBMP0001	Lower Parking Lot	Planned BMP Location	Soil Stockpile Area	Sheetflow	X	X	X	X	X	X	X	
LXBMP0001	LOX	Potential BMP Location	LOX	Sheetflow on dirt road	X	X	X	X	X	X	X	
LXBMP0002	LOX	Potential BMP Location	LOX	Sheetflow on dirt road	X	X	X	X	X	X	X	
LXBMP0003	LOX	Potential BMP Location	LOX	Sheetflow on dirt road	X	X	X	X	X	X	X	

Abbreviations:

BMP - Best Management Practice

P = Use analysis from co-located Performance Monitoring sample

X = Collect and Analyze

Table 1-4
Treatment BMP Monitoring Sampling Summary
2010-2011 Rainy Season
Page 2 of 2

Object ID	Location	Purpose	Areas Monitored	Notes	Total Recoverable Metals by 200.7/200.8	Total Dissolved Metals by 200.7/200.8	Total Dioxins by 1613	Total Suspended Solids by 2540	Particle Size Distribution (field measurement)	Particle Size Distribution by ASTM D422	Turbidity
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Notes:

* Sample location added or removed based on field conditions observed during the 2010/2011 rainy season as described below:

- 1) Sample BGBMP0006 was observed to be in ponded water during the 12/22/10 sampling event, and the sample location was temporarily moved upgradient to collect flowing water and named BGBMP0001; per the Expert Panel's recommendation, sample location permanently moved to BGBMP0001 during the 2/26/2011 sampling event.
- 2) Sample BGBMP0007 was observed to be in ponded water during the 12/22/10 sampling event, and the sample location was temporarily moved upgradient to collect flowing water and named BGBMP0002; per the Expert Panel's recommendation, sample location permanently moved to BGBMP0002 during the 3/21/2011 sampling event.

Table 1-5
2010/2011 Rain Event and Sampling Summary - Outfall 008 and 009 Watersheds
 (Page 1 of 1)

Rain Event	Total Rainfall ¹ (inches)	Average Rainfall Intensity ¹ (inches / hour)	Maximum 1-Hour Rainfall Intensity ¹ (inches / hour)	Outfall 008 Watershed					Outfall 009 Watershed				
				NPDES Samples	Performance Monitoring Samples ³			BMP Monitoring Samples ⁴	NPDES Samples	Performance Monitoring Samples ³			BMP Monitoring Samples ⁴
					Analyzed	Hold	Total			Analyzed	Hold	Total	
October 5-6, 2010	0.93	0.049	0.18	0	0	0	0	0	1	3	0	3	0
October 16-25, 2010	0.69	0.003	0.22	0	0	0	0	0	1	0	0	0	0
November 17-21, 2010	0.97	0.011	0.23	0	0	0	0	0	1	0	0	0	0
December 5, 2010	0.41	0.018	0.09	0	0	0	0	0	1	0	0	0	0
December 17-22, 2010	7.22	0.054	0.37	1	6	6	12	3	1	11	0	11	12
December 25-26, 2010	0.57	0.03	0.22	1	2	3	5	0	1	9	0	9	0
December 29, 2010	0.43	0.043	0.10	1	2	4	6	0	1	11	0	11	0
January 2-3, 2011	0.38	0.014	0.12	1	1	1	2	2	1	9	0	9	6
February 15-20, 2011	2.33	0.019	0.45	0	0	0	0	0	1	6	2	8	3
February 25-26, 2011	1.50	0.03	0.22	1	2	1	3	2	1	11	1	12	5
March 2-3, 2011	0.13	0.007	0.03	0	0	0	0	0	1	0	0	0	0
March 6-7, 2011	0.12	0.006	0.02	0	0	0	0	0	1	2	0	2	0
March 18-27, 2011 ¹	6.00	0.030	Not Available (>0.4)	1	2	5	7	6	1	14	1	15	27
May 15-18, 2011	0.67	0.009	0.08	0	0	0	0	0	0	0	0	0	2
Non Rain Event Total ²	1.03	--	--	--	--	--	--	--	--	--	--	--	--
TOTAL	23.38	--	--	6	15	20	35	13	13	76	4	80	55

Notes:

¹ Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except for the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

² On the following 13 days, rainfall was measured but was either not considered a rain event per the NPDES Permit definition, or flow was not observed at the Outfalls: October 2, 4, 30, 2010; November 7, 8, 23, 27, 2010; December 15, 2010; January 30, 2011; March 30, 2011; April 24, 2011; and May 9, 29, 2011.

³ The numbers of Performance Monitoring samples shown do not include RWQCB split samples.

⁴ The only BMP monitoring sample not analyzed was Outfall 009 BMP sample EVBMP0002 collected on February 16, 2011, which was placed on hold because runoff at sample location contained both rainwater from current event and rainwater from a previous rain event that was being discharged from a Baker tank.

**Table 1-6
NPDES Sample Results, Outfall 008
2010-2011 Rainy Season
Page 1 of 1**

		Object Name:	OUTFALL 008					
		Sample Name:	Outfall 008					
		Sample Date:	12/19/2010	12/26/2010	12/30/2010	01/03/2011	02/26/2011	03/21/2011
		Sample Type:	NPDES	NPDES	NPDES	NPDES	NPDES	NPDES
		Location:	Outfall	Outfall	Outfall	Outfall	Outfall	Outfall
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS								
TCDD TEQ_NoDNQ	ug/L	2.80E-08	ND	ND	ND	ND	ND	2.40E-10
INORGANICS								
Copper	ug/L	14	9.07	3.48 *	2.69 *	2.42 *	9.33 *	4.78 *
Lead	ug/L	5.2	6.7	1.0 *	0.87 Ja* (DNQ)	0.83 Ja* (DNQ)	3.8 *	2.4 *
MISCELLANEOUS								
Total Suspended Solids	mg/L	-/-	150	14	12	14	68	49
FIELD MEASUREMENTS								
Conductivity	mS	-/-	--	--	--	--	--	--
Temperature	deg C	-/-	53	48	49	42	52	50
pH	SU	6.5-8.5/-	7.3	7.3	7.6	7.6	7.5	7.6
Turbidity	NTU	-/-	--	--	--	--	--	--
RAINFALL MEASUREMENTS								
Intensity (Ave) - Pre-Sampling	in/hr	-/-	--	--	--	--	--	--
Intensity (Ave) - Rain Event	in/hr	-/-	0.054	0.03	0.043	0.014	0.048	0.03
Intensity (Max) - Pre-Sampling	in/hr	-/-	--	--	--	--	--	--
Intensity (Max) - Rain Event	in/hr	-/-	0.37	0.22	0.1	0.12	0.26	Not Available (>0.4)
Total - Pre-Sampling	in	-/-	--	--	--	--	--	--
Total - Rain Event	in	-/-	7.22	0.57	0.43	0.38	1.5	6.00

Notes:
See Appendix G for explanation of data validation qualifiers.

Table 1-7
NPDES Sample Results, Outfall 009
2010-2011 Rainy Season
Page 1 of 2

		Object Name:	OUTFALL 009								
		Sample Name:	Outfall 009								
		Sample Date:	10/06/2010	10/20/2010	11/20/2010	12/6/2010	12/18/2010	12/26/2010	12/30/2010	01/03/2011	02/16/2011
		Sample Type:	NPDES								
		Location:	Outfall								
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT								
DIOXINS											
TCDD TEQ_NoDNQ	ug/L	2.80E-08	3.90E-08	2.00E-10	1.60E-10	7.30E-10	3.60E-10	ND	ND	1.80E-10	2.30E-10
INORGANICS											
Cadmium	ug/L	4	0.18 J (DNQ)	<0.10*	0.12 Ja*(DNQ)	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*	<0.10*
Copper	ug/L	14	9.6	3.9*	3.22*	3.25*	3.9*	4.16*	3.47*	3.34*	3.06 *
Lead	ug/L	5.2	11	0.95 Ja* (DNQ)	1.2*	2.0*	2.3*	2.4*	1.5*	1.87 *	1.2 *
Mercury	ug/L	0.13	<0.10 U								
MISC											
Total Suspended Solids	mg/L	-/-	56	22	6.0 J (DNQ)	6.0 J (DNQ)	19	19	3.0 J (DNQ)	2.0 J (DNQ)	1.0 J (DNQ)
FIELD MEASUREMENTS											
Conductivity	mS	-/-	--	--	--	--	--	--	--	--	--
Temperature	deg C	-/-	58	58.1	51	44	53	48	47	41	52
pH	SU	6.5-8.5/-	7.8	7	8	7.9	7.3	7.6	7.7	7.1	7.8
Turbidity	NTU	-/-	--	--	--	--	--	--	--	--	--
RAINFALL MEASUREMENTS											
Intensity (Ave) - Pre-Sampling	in/hr	-/-	--	--	--	--	--	--	--	--	--
Intensity (Ave) - Rain Event	in/hr	-/-	0.049	0.003	0.011	0.018	0.054	0.03	0.043	0.014	0.019
Intensity (Max) - Pre-Sampling	in/hr	-/-	--	--	--	--	--	--	--	--	--
Intensity (Max) - Rain Event	in/hr	-/-	0.18	0.22	0.23	0.09	0.37	0.22	0.1	0.12	0.45
Total - Pre-Sampling	in	-/-	--	--	--	--	--	--	--	--	--
Total - Rain Event	in	-/-	0.93	0.69	0.97	0.41	7.22	0.57	0.43	0.38	2.33

Notes:
See Appendix G for explanation of data validation qualifiers.

Table 1-7
NPDES Sample Results, Outfall 009
2010-2011 Rainy Season
Page 2 of 2

		Object Name:	OUTFALL 009	OUTFALL 009	OUTFALL 009	OUTFALL 009
		Sample Name:	Outfall 009	Outfall 009	Outfall 009	Outfall 009
		Sample Date:	02/25/2011	03/03/2011	03/07/2011	03/20/2011
		Sample Type:	NPDES	NPDES	NPDES	NPDES
		Location:	Outfall	Outfall	Outfall	Outfall
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT
DIOXINS						
TCDD TEQ_NoDNQ	ug/L	2.80E-08	1.90E-10	ND	ND	8.26E-08
INORGANICS						
Cadmium	ug/L	4	0.16 B, Ja* (DNQ)	<0.10*	<0.10*	<0.10*
Copper	ug/L	14	3.17 *	2.77 *	3.24 *	4.92 *
Lead	ug/L	5.2	0.94 Ja* (DNQ)	<0.20 *	0.42 J* (DNQ)	5.1 *
Mercury	ug/L	0.13	<0.10 U	<0.10 U	<0.10 U	<0.10 U
MISC						
Total Suspended Solids	mg/L	-/-	6 Ja* (DNQ)	<1.0 *	7 J (DNQ)	47
FIELD MEASUREMENTS						
Conductivity	mS	-/-	--	--	--	--
Temperature	deg C	-/-	49	50	50	49
pH	SU	6.5-8.5/-	7.7	7.6	7.6	7.6
Turbidity	NTU	-/-	--	--	--	--
RAINFALL MEASUREMENTS						
Intensity (Ave) - Pre-Sampling	in/hr	-/-	--	--	--	--
Intensity (Ave) - Rain Event	in/hr	-/-	0.048	0.007	0.006	0.03
Intensity (Max) - Pre-Sampling	in/hr	-/-	--	--	--	--
Intensity (Max) - Rain Event	in/hr	-/-	0.26	0.03	0.02	Not Available (>0.4)
Total - Pre-Sampling	in	-/-	--	--	--	--
Total - Rain Event	in	-/-	1.5	0.13	0.12	6.00

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-1a
ISRA Performance Monitoring Sample Results, Outfall 008 Watershed
2009-2010 Rainy Season
Page 1 of 2

		Object Name	HZSW0007	HZSW0011	HZSW0012	HZSW0014	HZSW0007	HZSW0017	HZSW0017	HZSW0007
		Sample Name	HZSW0007S001	HZSW0011S001	HZSW0012S001	HZSW0014S001	HZSW0007S002	HZSW0017S001	HZSW0017S001-RWQCB	HZSW0007S003
		Sample Date	12/7/2009	1/21/2010	1/22/2010	1/22/2010	1/20/2010	2/6/2010	2/6/2010	2/6/2010
		Sample Type	Perf Mon	Perf Mon	Perf Mon Split	Perf Mon				
		Location	DG (HVS)	UG (HVS-3)	UG (HVS-2C)	UG (HVS-2B-1, -2)	DG (HVS)	UG (HVS-2A, -2D)	UG (HVS-2A, -2D)	DG (HVS)
		Rain Event	December 7-13, 2009	January 17-22, 2010	January 17-22, 2010	January 17-22, 2010	January 17-22, 2010	February 5-6, 2010	February 5-6, 2010	February 5-6, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS										
TCDD TEQ_NoDNQ	µg/L	2.80E-08	1.47E-10*	ND*	--	--	1.70E-10*	ND*	ND*	ND*
INORGANICS										
Copper	µg/L	14.0	13 *	2.4 *	--	5.2 B*	13 *	--	--	6.9 *
Lead	µg/L	5.2	7.5 *	--	<0.20 *	1.8 B*	1.8 *	14 *	5.1 *	3.1 *
MISC										
Total Suspended Solids	mg/L	-	270 *	6.0 Ja*	7.0 J*	61 *	140 *	76 *	536 *	22 *
FIELD MEASUREMENTS										
Conductivity (Field)	mS	-	0.464 *	0.100 *	0.086 *	0.148 *	0.506 *	0.061 *	--	0.248 *
pH (Field)	pH Units	8.5	7.11 *	6.15 *	6.44 *	6.12 *	7.30 *	6.34 *	--	7.28 *
Temperature	°C	86	9.8 *	11.1 *	11.09 *	11.79 *	9.9 *	12.8 *	--	12.0 *
Turbidity (Field)	NTU	-	175 *	2 *	2.02 *	71.4 *	142 *	210 *	--	50 *
RAINFALL MEASUREMENTS										
Intensity (Ave) - Pre-Sampling	in/hr	-	0.071	0.059	0.056	0.056	0.055	0.06	0.06	0.059
Intensity (Ave) - Rain Event	in/hr	-	0.07	0.052	0.052	0.052	0.052	0.043	0.043	0.043
Intensity (Max) - Pre-Sampling	in/hr	-	0.17	0.52	0.52	0.52	0.52	0.2	0.2	0.2
Intensity (Max) - Rain Event	in/hr	-	0.17	0.52	0.52	0.52	0.52	0.2	0.2	0.2
Total - Pre-Sampling	in	-	0.91	5.52	6.67	6.63	3.75	1.73	1.73	1.73
Total - Rain Event	in	-	3.43	6.88	6.88	6.88	6.88	1.84	1.84	1.84

Notes:
 See Appendix G for explanation of data validation qualifiers.

Table 2-1a
ISRA Performance Monitoring Sample Results, Outfall 008 Watershed
2009-2010 Rainy Season
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		Object Name	HZSW0007	HZSW0007	HZSW0007
		Sample Name	HZSW0007S003-RWQCB	HZSW0007S004	HZSW0007S004-RWQCB
		Sample Date	2/6/2010	2/27/2010	2/27/2010
		Sample Type	Perf Mon Split	Perf Mon	Perf Mon Split
		Location	DG (HVS)	DG (HVS)	DG (HVS)
		Rain Event	February 5-6, 2010	February 27, 2010	February 27, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT
DIOXINS					
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND*	ND*	1.80E-10*
INORGANICS					
Copper	µg/L	14.0	3.4 *	6.9 *	3.8 *
Lead	µg/L	5.2	0.83 *	4.0 *	3.2 *
MISC					
Total Suspended Solids	mg/L	-	27 *	320 *	479 *
FIELD MEASUREMENTS					
Conductivity (Field)	mS	-	--	0.235 *	--
pH (Field)	pH Units	8.5	--	7.48 *	--
Temperature	°C	86	--	NR *	--
Turbidity (Field)	NTU	-	--	100 *	--
RAINFALL MEASUREMENTS					
Intensity (Ave) - Pre-Sampling	in/hr	-	0.059	0.118	0.118
Intensity (Ave) - Rain Event	in/hr	-	0.043	0.089	0.089
Intensity (Max) - Pre-Sampling	in/hr	-	0.2	0.34	0.34
Intensity (Max) - Rain Event	in/hr	-	0.2	0.34	0.34
Total - Pre-Sampling	in	-	1.73	1.4	1.4
Total - Rain Event	in	-	1.84	1.52	1.52

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-1b
ISRA Performance Monitoring Sample Results, Outfall 008 Watershed
2009-2010 Rainy Season
Page 1 of 2

		Object Name	HZSW0003	HZSW0003	HZSW0003	HZSW0003	HZSW0005	HZSW0005	HZSW0003
		Sample Name	HZSW0003S001	HZSW0003S002	HZSW0003S003	HZSW0003S003-RWQCB	HZSW0005S003	HZSW0005S003-RWQCB	HZSW0003S004
		Sample Date	12/12/2009	1/20/2010	2/5/2010	2/5/2010	2/6/2010	2/6/2010	2/27/2010
		Sample Type	Perf Mon	Perf Mon	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	UG (DRG-1)	UG (DRG-1)	DG (CYN-1, DRG-1)
		Rain Event	December 7-13, 2009	January 17-22, 2010	February 5-6, 2010	February 5-6, 2010	February 5-6, 2010	February 5-6, 2010	February 27, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND*	ND*	ND*	ND*	ND*	ND	ND*
INORGANICS									
Copper	µg/L	14.0	2.4 *	13 *	19 *	4.2 *	--	--	1.9 Ja*
Lead	µg/L	5.2	<0.20 *	14 *	19 *	6.3 *	--	--	0.40 Ja*
MISC									
Total Suspended Solids	mg/L	-	94 *	840 *	150 *	681 *	5.0 J*	<10 *	16 *
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.181 *	0.244 *	0.232 *	--	0.109 *	--	0.124 *
pH (Field)	pH Units	8.5	7.09 *	7.35 *	6.96 *	--	7.10 *	--	7.4 *
Temperature	°C	86	12.2 *	9.7 *	10.5 *	--	12.0 *	--	NR *
Turbidity (Field)	NTU	-	100 *	163 *	999 *	--	8 *	--	7 *
RAINFALL MEASUREMENTS									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.034	0.057	0.079	0.079	0.057	0.057	0.119
Intensity (Ave) - Rain Event	in/hr	-	0.036	0.052	0.043	0.043	0.043	0.043	0.089
Intensity (Max) - Pre-Sampling	in/hr	-	0.25	0.52	0.14	0.14	0.2	0.2	0.34
Intensity (Max) - Rain Event	in/hr	-	0.25	0.52	0.2	0.2	0.2	0.2	0.34
Total - Pre-Sampling	in	-	1.32	4.04	0.63	0.63	1.73	1.73	1.33
Total - Rain Event	in	-	3.43	6.88	1.84	1.84	1.84	1.84	1.52

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-1b
ISRA Performance Monitoring Sample Results, Outfall 008 Watershed
2009-2010 Rainy Season
Page 2 of 2

		Object Name	HZSW0003	HZSW0003
		Sample Name	HZSW0003S004-RWQCB	HZSW0003S005
		Sample Date	2/27/2010	3/7/2010
		Sample Type	Perf Mon Split	Perf Mon
		Location	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)
		Rain Event	February 27, 2010	March 6, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT
DIOXINS				
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND*	ND*
INORGANICS				
Copper	µg/L	14.0	1.6 *	1.5 Ja*
Lead	µg/L	5.2	0.36 *	<0.20 *
MISC				
Total Suspended Solids	mg/L	-	<10 *	9.0 Ja*
FIELD MEASUREMENTS				
Conductivity (Field)	mS	-	--	0.147 *
pH (Field)	pH Units	8.5	--	7.1 *
Temperature	°C	86	--	14.4 *
Turbidity (Field)	NTU	-	--	1 *
RAINFALL MEASUREMENTS				
Intensity (Ave) - Pre-Sampling	in/hr	-	0.119	0.015
Intensity (Ave) - Rain Event	in/hr	-	0.089	0.015
Intensity (Max) - Pre-Sampling	in/hr	-	0.34	0.13
Intensity (Max) - Rain Event	in/hr	-	0.34	0.13
Total - Pre-Sampling	in	-	1.33	0.38
Total - Rain Event	in	-	1.52	0.38

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-2a
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
Page 1 of 3

		Object Name	A1SW0004	A1SW0005	A1SW0004	A1SW0005	A1SW0004	A1SW0004	A1SW0005	A1SW0005
		Sample Name	A1SW0004S001	A1SW0005S001	A1SW0004S002	A1SW0005S002	A1SW0004S003	A1SW0004S003-RWQCB	A1SW0005S003	A1SW0005S003-RWQCB
		Sample Date	12/11/2009	12/11/2009	1/19/2010	1/19/2010	2/5/2010	2/5/2010	2/5/2010	2/5/2010
		Sample Type	Perf Mon	Perf Mon	Perf Mon	Perf Mon	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location	UG (CM-9, A1LF)	DG (CM-9, A1LF)	UG (CM-9, A1LF)	DG (CM-9, A1LF)	UG (CM-9, A1LF)	UG (CM-9, A1LF)	DG (CM-9, A1LF)	DG (CM-9, A1LF)
		Rain Event	December 7-13, 2009	December 7-13, 2009	January 17-22, 2010	January 17-22, 2010	February 5-6, 2010	February 5-6, 2010	February 5-6, 2010	February 5-6, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS										
TCDD TEQ_NoDNQ	µg/L	2.80E-08	--	--	--	--	--	--	--	--
INORGANICS										
Cadmium	µg/L	3.1	0.25 J*	0.15 J*	0.18 J*	0.15 J*	0.21 RL1, J*	0.47 *	<0.10 *	0.14 *
Copper	µg/L	14.0	5.3 *	5.1 *	4.4 *	4.3 *	9.9 *	4.7 *	11 *	4.3 *
Lead	µg/L	5.2	0.96 J*	<0.20 *	<0.20 *	0.34 J*	6.9 *	3.6 *	15 *	9.8 *
Mercury	µg/L	0.13	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.5 *	<0.10 *	<0.5 *
MISC										
Total Suspended Solids	mg/L	-	100 *	7.0 J*	4.0 J*	21 *	180 *	48 *	100 *	64 *
pH (Lab)	pH Units	8.5	--	--	--	--	--	--	--	--
FIELD MEASUREMENTS										
Conductivity (Field)	mS	-	0.611 *	0.602 *	0.770 *	0.757 *	0.345 *	--	0.101 *	--
pH (Field)	pH Units	8.5	6.87 *	7.12 *	7.08 *	7.49 *	6.91 *	--	6.73 *	--
Temperature	°C	86	10.7 *	10.2 *	11.4 *	10.9 *	10.8 *	--	11.0 *	--
Turbidity (Field)	NTU	-	20 *	151 *	172 *	10 *	185 *	--	134 *	--
RAINFALL MEASUREMENTS										
Intensity (Ave) - Pre-Sampling	in/hr	-	0.049	0.048	0.062	0.062	0.088	0.088	0.09	0.09
Intensity (Ave) - Rain Event	in/hr	-	0.036	0.036	0.052	0.052	0.043	0.043	0.043	0.043
Intensity (Max) - Pre-Sampling	in/hr	-	0.25	0.25	0.52	0.52	0.14	0.14	0.14	0.14
Intensity (Max) - Rain Event	in/hr	-	0.25	0.25	0.52	0.52	0.2	0.2	0.2	0.2
Total - Pre-Sampling	in	-	0.77	0.77	2.74	2.74	0.48	0.48	0.51	0.51
Total - Rain Event	in	-	3.43	3.43	6.88	6.88	1.84	1.84	1.84	1.84

Notes:
 See Appendix G for explanation of data validation qualifiers.

Table 2-2a
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
Page 2 of 3

		Object Name	A1SW0004	A1SW0004	A1SW0004	A1SW0004	A1SW0005	A1SW0005	A1SW0004	A1SW0005
		Sample Name	A1SW0004S004	A1SW0004S004-RWQCB	A1SW0004S005	A1SW0004S005-RWQCB	A1SW0005S004	A1SW0005S004-RWQCB	A1SW0004S006	A1SW0005S005
		Sample Date	2/20/2010	2/20/2010	2/27/2010	2/27/2010	2/27/2010	2/27/2010	3/7/2010	3/7/2010
		Sample Type	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon
		Location	UG (CM-9, A1LF)	UG (CM-9, A1LF)	UG (CM-9, A1LF)	UG (CM-9, A1LF)	DG (CM-9, A1LF)	DG (CM-9, A1LF)	UG (CM-9, A1LF)	DG (CM-9, A1LF)
		Rain Event	February 19-20, 2010	February 19-20, 2010	February 27, 2010	February 27, 2010	February 27, 2010	February 27, 2010	March 6, 2010	March 6, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS										
TCDD TEQ_NoDNQ	µg/L	2.80E-08	--	--	--	--	--	--	--	--
INORGANICS										
Cadmium	µg/L	3.1	0.18 J*	0.16 *	0.96 Ja*	1.1 *	0.43 Ja*	0.36 *	0.13 Ja*	0.11 Ja*
Copper	µg/L	14.0	3.0 *	2.7 *	14 *	7.7 *	9.1 *	5.3 *	2.6 *	2.5 *
Lead	µg/L	5.2	<0.20 *	<0.017 *	11 *	6.2 *	6.4 *	4 *	<0.20 *	0.50 Ja*
Mercury	µg/L	0.13	<0.10 *	<0.5 *	<0.10 *	<0.5 *	<0.10 *	<0.5 *	0.98 *	1.7 *
MISC										
Total Suspended Solids	mg/L	-	7.0 J*	<10 *	110 *	131 *	87 *	73 *	8.0 Ja*	13 *
pH (Lab)	pH Units	8.5	--	--	--	--	--	--	--	--
FIELD MEASUREMENTS										
Conductivity (Field)	mS	-	0.604 *	--	0.099 *	--	0.086 *	--	--	--
pH (Field)	pH Units	8.5	7.2 *	--	7.1 *	--	6.99 *	--	--	--
Temperature	°C	86	11.7 *	--	NR *	--	NR *	--	--	--
Turbidity (Field)	NTU	-	5 *	--	163 *	--	155 *	--	--	--
RAINFALL MEASUREMENTS										
Intensity (Ave) - Pre-Sampling	in/hr	-	0.013	0.013	0.159	0.159	0.159	0.159	0.017	0.016
Intensity (Ave) - Rain Event	in/hr	-	0.012	0.012	0.089	0.089	0.089	0.089	0.015	0.015
Intensity (Max) - Pre-Sampling	in/hr	-	0.05	0.05	0.34	0.34	0.34	0.34	0.13	0.13
Intensity (Max) - Rain Event	in/hr	-	0.05	0.05	0.34	0.34	0.34	0.34	0.13	0.13
Total - Pre-Sampling	in	-	0.16	0.16	1.11	1.11	1.14	1.14	0.38	0.38
Total - Rain Event	in	-	0.14	0.14	1.52	1.52	1.52	1.52	0.38	0.38

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-2a
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
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		Object Name	A1SW0004	A1SW0004
		Sample Name	A1SW0004S007	A1SW0004S007-RWQCB
		Sample Date	4/5/2010	4/5/2010
		Sample Type	Perf Mon	Perf Mon Split
		Location	UG (CM-9, A1LF)	UG (CM-9, A1LF)
		Rain Event	April 4-5, 2010	April 4-5, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT
DIOXINS				
TCDD TEQ_NoDNQ	µg/L	2.80E-08	5.58E-08	4.37E-08
INORGANICS				
Cadmium	µg/L	3.1	0.23 J*	0.19 *
Copper	µg/L	14.0	7.6 *	5.6 *
Lead	µg/L	5.2	7.3 *	1.1 *
Mercury	µg/L	0.13	<0.10 *	<0.5 *
MISC				
Total Suspended Solids	mg/L	-	23 *	22.0 *
pH (Lab)	pH Units	8.5	7.73 HFT*	--
FIELD MEASUREMENTS				
Conductivity (Field)	mS	-	0.387 *	--
pH (Field)	pH Units	8.5	--	--
Temperature	°C	86	15.0 *	--
Turbidity (Field)	NTU	-	38 *	--
RAINFALL MEASUREMENTS				
Intensity (Ave) - Pre-Sampling	in/hr	-	0.058	0.058
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.054
Intensity (Max) - Pre-Sampling	in/hr	-	0.23	0.23
Intensity (Max) - Rain Event	in/hr	-	0.23	0.23
Total - Pre-Sampling	in	-	0.86	0.86
Total - Rain Event	in	-	0.86	0.86

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-2b
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
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		Object Name	A1SW0002	A1SW0003	A1SW0002	A1SW0003	A1SW0002	A1SW0002	A1SW0003	A1SW0003
		Sample Name	A1SW0002S002	A1SW0003S001	A1SW0002S003	A1SW0003S002	A1SW0002S004	A1SW0002S004-RWQCB	A1SW0003S003	A1SW0003S003-RWQCB
		Sample Date	1/20/2010	1/20/2010	2/5/2010	2/5/2010	2/27/2010	2/27/2010	2/27/2010	2/27/2010
		Sample Type	Perf Mon	Perf Mon	Perf Mon	Perf Mon	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location	UG (CM-8)	DG (CM-8)	UG (CM-8)	DG (CM-8)	UG (CM-8)	UG (CM-8)	DG (CM-8)	DG (CM-8)
		Rain Event	January 17-22, 2010	January 17-22, 2010	February 5-6, 2010	February 5-6, 2010	February 27, 2010	February 27, 2010	February 27, 2010	February 27, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS										
TCDD TEQ_NoDNQ	µg/L	2.80E-08	--	--	--	--	--	--	--	--
INORGANICS										
Cadmium	µg/L	3.1	--	--	--	--	--	--	--	--
Copper	µg/L	14.0	--	--	--	--	--	--	--	--
Lead	µg/L	5.2	8.5 *	2.5 *	11 *	2.3 *	0.74 Ja*	0.52 *	3.1 *	2.4 *
Mercury	µg/L	0.13	--	--	--	--	--	--	--	--
MISC										
Total Suspended Solids	mg/L	-	82 *	26 *	55 *	18 *	2.0 Ja*	<10 *	10 *	<10 *
pH (Lab)	pH Units	8.5	--	--	--	--	--	--	--	--
FIELD MEASUREMENTS										
Conductivity (Field)	mS	-	0.122 *	0.116 *	0.075 *	0.133 *	0.042 *	--	0.035 *	--
pH (Field)	pH Units	8.5	6.85 *	6.60 *	6.67 *	6.85 *	5.78 *	--	5.86 *	--
Temperature	°C	86	10.6 *	10.2 *	10.9 *	11.6 *	NR *	--	NR *	--
Turbidity (Field)	NTU	-	31 *	31 *	13 *	25 *	2 *	--	14 *	--
RAINFALL MEASUREMENTS										
Intensity (Ave) - Pre-Sampling	in/hr	-	0.059	0.06	0.088	0.086	0.159	0.159	0.159	0.159
Intensity (Ave) - Rain Event	in/hr	-	0.052	0.052	0.043	0.043	0.089	0.089	0.089	0.089
Intensity (Max) - Pre-Sampling	in/hr	-	0.52	0.52	0.14	0.14	0.34	0.34	0.34	0.34
Intensity (Max) - Rain Event	in/hr	-	0.52	0.52	0.2	0.2	0.34	0.34	0.34	0.34
Total - Pre-Sampling	in	-	4.24	4.27	0.58	0.58	1.2	1.2	1.24	1.24
Total - Rain Event	in	-	6.88	6.88	1.84	1.84	1.52	1.52	1.52	1.52

Notes:
 See Appendix G for explanation of data validation qualifiers.

Table 2-2b
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
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		Object Name	A1SW0002	A1SW0003
		Sample Name	A1SW0002S005	A1SW0003S004
		Sample Date	3/7/2010	3/7/2010
		Sample Type	Perf Mon	Perf Mon
		Location	UG (CM-8)	DG (CM-8)
		Rain Event	March 6, 2010	March 6, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT
DIOXINS				
TCDD TEQ_NoDNQ	µg/L	2.80E-08	--	--
INORGANICS				
Cadmium	µg/L	3.1	--	--
Copper	µg/L	14.0	--	--
Lead	µg/L	5.2	1.1 *	<0.20 *
Mercury	µg/L	0.13	--	--
MISC				
Total Suspended Solids	mg/L	-	11 *	10 *
pH (Lab)	pH Units	8.5	--	--
FIELD MEASUREMENTS				
Conductivity (Field)	mS	-	--	--
pH (Field)	pH Units	8.5	--	--
Temperature	°C	86	--	--
Turbidity (Field)	NTU	-	--	--
RAINFALL MEASUREMENTS				
Intensity (Ave) - Pre-Sampling	in/hr	-	0.016	0.016
Intensity (Ave) - Rain Event	in/hr	-	0.015	0.015
Intensity (Max) - Pre-Sampling	in/hr	-	0.13	0.13
Intensity (Max) - Rain Event	in/hr	-	0.13	0.13
Total - Pre-Sampling	in	-	0.38	0.38
Total - Rain Event	in	-	0.38	0.38

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-2c
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
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		Object Name	A1SW0006	A1SW0007	A1SW0006	A1SW0007	A1SW0006	A1SW0006	A1SW0006	A1SW0006
		Sample Name	A1SW0006S001	A1SW0007S001	A1SW0006S002	A1SW0007S002	A1SW0006S003	A1SW0006S003-RWQCB	A1SW0006S004	A1SW0006S004-RWQCB
		Sample Date	1/20/2010	1/20/2010	2/5/2010	2/5/2010	2/20/2010	2/20/2010	2/27/2010	2/27/2010
		Sample Type	Perf Mon	Perf Mon	Perf Mon	Perf Mon	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location	UG (CM-11)	DG (CM-11)	UG (CM-11)	DG (CM-11)	UG (CM-11)	UG (CM-11)	UG (CM-11)	UG (CM-11)
		Rain Event	January 17-22, 2010	January 17-22, 2010	February 5-6, 2010	February 5-6, 2010	February 19-20, 2010	February 19-20, 2010	February 27, 2010	February 27, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS										
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND*	1.00E-10*	1.50E-10*	3.50E-10*	3.70E-10*	2.68E-08*	ND*	4.90E-07
INORGANICS										
Cadmium	µg/L	3.1	--	--	--	--	--	--	--	--
Copper	µg/L	14.0	--	--	--	--	--	--	--	--
Lead	µg/L	5.2	--	--	--	--	--	--	--	--
Mercury	µg/L	0.13	--	--	--	--	--	--	--	--
MISC										
Total Suspended Solids	mg/L	-	19 *	9.0 Ja*	15 *	24 *	19 *	12 *	3.0 Ja*	<10 *
pH (Lab)	pH Units	8.5	--	--	--	--	--	--	--	--
FIELD MEASUREMENTS										
Conductivity (Field)	mS	-	0.120 *	0.131 *	0.097 *	0.097 *	0.3 *	--	0.043 *	--
pH (Field)	pH Units	8.5	6.51 *	6.51 *	6.8 *	7.03 *	7.71 *	--	6.2 *	--
Temperature	°C	86	10.0 *	9.8 *	10.8 *	10.9 *	11.6 *	--	NR *	--
Turbidity (Field)	NTU	-	21 *	21 *	31 *	51 *	2 *	--	7 *	--
RAINFALL MEASUREMENTS										
Intensity (Ave) - Pre-Sampling	in/hr	-	0.059	0.059	0.093	0.091	0.013	0.013	0.155	0.155
Intensity (Ave) - Rain Event	in/hr	-	0.052	0.052	0.043	0.043	0.012	0.012	0.089	0.089
Intensity (Max) - Pre-Sampling	in/hr	-	0.52	0.52	0.14	0.14	0.05	0.05	0.34	0.34
Intensity (Max) - Rain Event	in/hr	-	0.52	0.52	0.2	0.2	0.05	0.05	0.34	0.34
Total - Pre-Sampling	in	-	4.21	4.22	0.56	0.57	0.16	0.16	1.28	1.28
Total - Rain Event	in	-	6.88	6.88	1.84	1.84	0.14	0.14	1.52	1.52

Notes:
 See Appendix G for explanation of data validation qualifiers.

Table 2-2c
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
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		Object Name	A1SW0007	A1SW0007	A1SW0006	A1SW0007
		Sample Name	A1SW0007S003	A1SW0007S003-RWQCB	A1SW0006S005	A1SW0007S004
		Sample Date	2/27/2010	2/27/2010	3/7/2010	3/7/2010
		Sample Type	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon
		Location	DG (CM-11)	DG (CM-11)	UG (CM-11)	DG (CM-11)
		Rain Event	February 27, 2010	February 27, 2010	March 6, 2010	March 6, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT
DIOXINS						
TCDD TEQ_NoDNQ	µg/L	2.80E-08	3.00E-10*	2.75E-08*	ND*	ND*
INORGANICS						
Cadmium	µg/L	3.1	--	--	--	--
Copper	µg/L	14.0	--	--	--	--
Lead	µg/L	5.2	--	--	--	--
Mercury	µg/L	0.13	--	--	--	--
MISC						
Total Suspended Solids	mg/L	-	2.0 Ja*	<10 *	10 *	6.0 Ja*
pH (Lab)	pH Units	8.5	--	--	--	--
FIELD MEASUREMENTS						
Conductivity (Field)	mS	-	0.043 *	--	--	--
pH (Field)	pH Units	8.5	6.15 *	--	--	--
Temperature	°C	86	NR *	--	--	--
Turbidity (Field)	NTU	-	21 *	--	--	--
RAINFALL MEASUREMENTS						
Intensity (Ave) - Pre-Sampling	in/hr	-	0.153	0.153	0.015	0.015
Intensity (Ave) - Rain Event	in/hr	-	0.089	0.089	0.015	0.015
Intensity (Max) - Pre-Sampling	in/hr	-	0.34	0.34	0.13	0.13
Intensity (Max) - Rain Event	in/hr	-	0.34	0.34	0.13	0.13
Total - Pre-Sampling	in	-	1.29	1.29	0.38	0.38
Total - Rain Event	in	-	1.52	1.52	0.38	0.38

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-2d
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
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		Object Name	LXSW0001	LXSW0002	LXSW0001	LXSW0001	LXSW0002	LXSW0002	LXSW0002
		Sample Name	LXSW0001S001	LXSW0002S001	LXSW0001S002	LXSW0001S002-RWQCB	LXSW0002S002	LXSW0002S003	LXSW0002S003-RWQCB
		Sample Date	1/19/2010	1/19/2010	2/6/2010	2/6/2010	2/6/2010	2/27/2010	2/27/2010
		Sample Type	Perf Mon	Perf Mon	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon	Perf Mon Split
		Location	UG (CM-3)	DG (CM-3)	UG (CM-3)	UG (CM-3)	DG (CM-3)	DG (CM-3)	DG (CM-3)
		Rain Event	January 17-22, 2010	January 17-22, 2010	February 5-6, 2010	February 5-6, 2010	February 5-6, 2010	February 27, 2010	February 27, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	1.40E-10*	4.12E-08	ND*	1.10E-10*	ND*	ND*	ND*
INORGANICS									
Cadmium	µg/L	3.1	0.26 RL1, J*	0.91 RL1, Ja*	<0.10 *	<0.013 *	<0.10 *	<0.10 *	<0.013 *
Copper	µg/L	14.0	7.5 *	12 *	1.5 J*	1.2 *	1.4 J*	1.7 Ja*	1.7 *
Lead	µg/L	5.2	16 *	27 *	1.0 *	0.64 *	0.25 J*	0.47 Ja*	0.47 *
Mercury	µg/L	0.13	<0.10 H-1*	<0.10 *	<0.10 *	<0.5 *	<0.10 *	<0.10 *	<0.5 *
MISC									
Total Suspended Solids	mg/L	-	39 *	190 *	10 *	22 *	2.0 J*	4.0 Ja*	19 *
pH (Lab)	pH Units	8.5	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.166 *	0.176 *	0.06 *	--	0.071 *	0.076 *	--
pH (Field)	pH Units	8.5	6.46 *	6.46 *	6.61 *	--	6.71 *	6.41 *	--
Temperature	°C	86	10.7 *	10.7 *	11.0 *	--	10.9 *	NR *	--
Turbidity (Field)	NTU	-	349 *	605 *	260 *	--	3 *	7 *	--
RAINFALL MEASUREMENTS									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.071	0.071	0.062	0.062	0.062	0.143	--
Intensity (Ave) - Rain Event	in/hr	-	0.052	0.052	0.043	0.043	0.043	0.089	--
Intensity (Max) - Pre-Sampling	in/hr	-	0.52	0.52	0.2	0.2	0.2	0.34	--
Intensity (Max) - Rain Event	in/hr	-	0.52	0.52	0.2	0.2	0.2	0.34	--
Total - Pre-Sampling	in	-	3.44	3.44	1.7	1.7	1.71	1.31	--
Total - Rain Event	in	-	6.88	6.88	1.84	1.84	1.84	1.52	--

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-2e
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
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		Object Name	A2SW0001	A2SW0002	A2SW0001	A2SW0001	A2SW0006	A2SW0006	A2SW0002
		Sample Name	A2SW0001S001	A2SW0002S001	A2SW0001S002	A2SW0001S002-RWQCB	A2SW0006S001	A2SW0006S001-RWQCB	A2SW0002S002
		Sample Date	1/19/2010	1/19/2010	2/6/2010	2/6/2010	2/5/2010	2/5/2010	2/5/2010
		Sample Type	Perf Mon	Perf Mon	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)
		Rain Event	January 17-22, 2010	January 17-22, 2010	February 5-6, 2010				
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	3.15E-06	4.45E-07	1.50E-10*	4.70E-10*	1.56E-08	--	2.40E-09
INORGANICS									
Cadmium	µg/L	3.1	--	--	--	--	--	--	--
Copper	µg/L	14.0	--	--	--	--	--	--	--
Lead	µg/L	5.2	55 *	39 *	2.9 *	2.4 *	17 *	9.8 *	12 *
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISC									
Total Suspended Solids	mg/L	-	890 *	610 *	12 *	<10 *	250 *	688 *	46 *
pH (Lab)	pH Units	8.5	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.082 *	0.049 *	0.21 *	--	0.184 *	--	0.071 *
pH (Field)	pH Units	8.5	6.52 *	6.71 *	7.32 *	--	6.65 *	--	7.11 *
Temperature	°C	86	11.1 *	10.3 *	11.0 *	--	10.7 *	--	11.0 *
Turbidity (Field)	NTU	-	398 *	815 *	34 *	--	42 *	--	132 *
RAINFALL MEASUREMENTS									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.071	0.071	0.063	0.063	0.073	0.073	0.082
Intensity (Ave) - Rain Event	in/hr	-	0.052	0.052	0.043	0.043	0.043	0.043	0.043
Intensity (Max) - Pre-Sampling	in/hr	-	0.52	0.52	0.2	0.2	0.14	0.14	0.14
Intensity (Max) - Rain Event	in/hr	-	0.52	0.52	0.2	0.2	0.2	0.2	0.2
Total - Pre-Sampling	in	-	3.43	3.44	1.68	1.68	0.3	0.3	0.4
Total - Rain Event	in	-	6.88	6.88	1.84	1.84	1.84	1.84	1.84

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-2e
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
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		Object Name	A2SW0002	A2SW0006	A2SW0006	A2SW0002	A2SW0002	A2SW0001	A2SW0006
		Sample Name	A2SW0002S002-RWQCB	A2SW0006S002	A2SW0006S002-RWQCB	A2SW0002S003	A2SW0002S003-RWQCB	A2SW0001S003	A2SW0006S003
		Sample Date	2/5/2010	2/20/2010	2/20/2010	2/20/2010	2/20/2010	2/27/2010	2/27/2010
		Sample Type	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon
		Location	DG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)
		Rain Event	February 5-6, 2010	February 19-20, 2010	February 19-20, 2010	February 19-20, 2010	February 19-20, 2010	February 27, 2010	February 27, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	9.70E-08	4.50E-10*	4.35E-08	ND*	6.70E-10*	7.68E-08	ND*
INORGANICS									
Cadmium	µg/L	3.1	--	--	--	--	--	--	--
Copper	µg/L	14.0	--	--	--	--	--	--	--
Lead	µg/L	5.2	9.8 *	1.6 *	0.87 *	<0.20 *	<0.017 *	4.1 *	0.31 Ja*
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISC									
Total Suspended Solids	mg/L	-	42 *	16 *	<10 *	7.0 J*	<10 *	8.0 H3, Ja*	3.0 Ja*
pH (Lab)	pH Units	8.5	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	--	0.39 *	--	0.393 *	--	--	0.106 *
pH (Field)	pH Units	8.5	--	7.45 *	--	7.54 *	--	--	6.83 *
Temperature	°C	86	--	12 *	--	11.4 *	--	--	NR *
Turbidity (Field)	NTU	-	--	1 *	--	6 *	--	--	3 *
RAINFALL MEASUREMENTS									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.082	0.012	0.012	0.012	0.012	0.135	0.133
Intensity (Ave) - Rain Event	in/hr	-	0.043	0.012	0.012	0.012	0.012	0.089	0.089
Intensity (Max) - Pre-Sampling	in/hr	-	0.14	0.05	0.05	0.05	0.05	0.34	0.34
Intensity (Max) - Rain Event	in/hr	-	0.2	0.05	0.05	0.05	0.05	0.34	0.34
Total - Pre-Sampling	in	-	0.4	0.16	0.16	0.16	0.16	1.31	1.31
Total - Rain Event	in	-	1.84	0.14	0.14	0.14	0.14	1.52	1.52

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-2e
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
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		Object Name	A2SW0006	A2SW0002	A2SW0002	A2SW0006	A2SW0002	A2SW0001	A2SW0001	A2SW0002
		Sample Name	A2SW0006S003-RWQCB	A2SW0002S004	A2SW0002S004-RWQCB	A2SW0006S004	A2SW0002S005	A2SW0001S004	A2SW0001S004-RWQCB	A2SW0002S006
		Sample Date	2/27/2010	2/27/2010	2/27/2010	3/7/2010	3/7/2010	4/5/2010	4/5/2010	4/5/2010
		Sample Type	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon	Perf Mon	Perf Mon Split	Perf Mon
		Location	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)
		Rain Event	February 27, 2010	February 27, 2010	February 27, 2010	March 6, 2010	March 6, 2010	April 4-5, 2010	April 4-5, 2010	April 4-5, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS										
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND*	ND*	1.10E-10*	2.20E-10*	ND*	2.83E-07	1.76E-07	1.65E-07
INORGANICS										
Cadmium	µg/L	3.1	--	--	--	--	--	--	--	--
Copper	µg/L	14.0	--	--	--	--	--	--	--	--
Lead	µg/L	5.2	0.22 *	0.50 Ja*	0.49 *	1.5 *	<0.20 *	5.1 *	1.8 *	2.9 *
Mercury	µg/L	0.13	--	--	--	--	--	--	--	--
MISC										
Total Suspended Solids	mg/L	-	<10 *	5.0 Ja*	<10 *	<1.0 *	10 *	17 *	19.0 *	11 *
pH (Lab)	pH Units	8.5	--	--	--	--	--	7.01 HFT*	--	7.55 HFT*
FIELD MEASUREMENTS										
Conductivity (Field)	mS	-	--	0.103 *	--	0.134 *	0.107 *	0.092 *	--	0.108 *
pH (Field)	pH Units	8.5	--	6.9 *	--	6.07 *	7.05 *	--	--	--
Temperature	°C	86	--	NR *	--	12.3 *	14.2 *	16.7 *	--	13.6 *
Turbidity (Field)	NTU	-	--	6 *	--	2 *	1 *	81 *	--	28 *
RAINFALL MEASUREMENTS										
Intensity (Ave) - Pre-Sampling	in/hr	-	0.133	0.131	0.131	0.016	0.016	0.062	0.062	0.061
Intensity (Ave) - Rain Event	in/hr	-	0.089	0.089	0.089	0.015	0.015	0.054	0.054	0.054
Intensity (Max) - Pre-Sampling	in/hr	-	0.34	0.34	0.34	0.13	0.13	0.23	0.23	0.23
Intensity (Max) - Rain Event	in/hr	-	0.34	0.34	0.34	0.13	0.13	0.23	0.23	0.23
Total - Pre-Sampling	in	-	1.31	1.31	1.31	0.38	0.38	0.86	0.86	0.86
Total - Rain Event	in	-	1.52	1.52	1.52	0.38	0.38	0.86	0.86	0.86

Notes:
 See Appendix G for explanation of data validation qualifiers.

Table 2-2e
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2009-2010 Rainy Season
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		Object Name	A2SW0002
		Sample Name	A2SW0002S006-RWQCB
		Sample Date	4/5/2010
		Sample Type	Perf Mon Split
		Location	DG (CM-1, A2LF-3)
		Rain Event	April 4-5, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT
DIOXINS			
TCDD TEQ_NoDNQ	µg/L	2.80E-08	8.17E-08
INORGANICS			
Cadmium	µg/L	3.1	--
Copper	µg/L	14.0	--
Lead	µg/L	5.2	1.4 *
Mercury	µg/L	0.13	--
MISC			
Total Suspended Solids	mg/L	-	13.0 *
pH (Lab)	pH Units	8.5	--
FIELD MEASUREMENTS			
Conductivity (Field)	mS	-	--
pH (Field)	pH Units	8.5	--
Temperature	°C	86	--
Turbidity (Field)	NTU	-	--
RAINFALL MEASUREMENTS			
Intensity (Ave) - Pre-Sampling	in/hr	-	0.061
Intensity (Ave) - Rain Event	in/hr	-	0.054
Intensity (Max) - Pre-Sampling	in/hr	-	0.23
Intensity (Max) - Rain Event	in/hr	-	0.23
Total - Pre-Sampling	in	-	0.86
Total - Rain Event	in	-	0.86

Notes:

See Appendix G for explanation of data validation qualifiers.

Table 2-3
ISRA Performance Monitoring Sample Collection Matrix
2010-2011 Rainy Season
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Watershed	Object ID	Sample ID	Collection Date	Collection Time	Location	Position	Position Type	Sample Type	Matrix	Cadmium (Total Recoverable) (Method 200.8)	Copper (Total Recoverable) (Method 200.8)	Lead (Total Recoverable) (Method 200.8)	Mercury (Total Recoverable) (Method 245.1)	Dioxins (Method 1613)	Total Suspended Solids (Method 2540)	Comments
008	HZSW0003	HZSW0003S006	12/19/2010	8:50	CYN-1, DRG-1	Downgradient	Primary	Primary	Water		X	X		X	X	
008	HZSW0003	HZSW0003S006-RWQCB	12/19/2010	8:50	CYN-1, DRG-1	Downgradient	Primary	RWQCB Split	Water		X	X		X	X	
008	HZSW0004	HZSW0004S003	12/19/2010	10:40	DRG-1	Downgradient	Secondary	Primary	Water					H	H	
008	HZSW0004	HZSW0004S003-RWQCB	12/19/2010	10:40	DRG-1	Downgradient	Secondary	RWQCB Split	Water					H	H	
008	HZSW0007	HZSW0007S005	12/19/2010	12:50	all HVS	Downgradient	Primary	Primary	Water		X	X		X	X	
008	HZSW0007	HZSW0007S005-RWQCB	12/19/2010	12:50	all HVS	Downgradient	Primary	RWQCB Split	Water		X	X		X	X	
008	HZSW0010	HZSW0010S004	12/19/2010	13:28	HVS-3, -4	Downgradient	Secondary	Primary	Water		H			H	H	
008	HZSW0010	HZSW0010S004-RWQCB	12/19/2010	13:28	HVS-3, -4	Downgradient	Secondary	RWQCB Split	Water		H			H	H	
008	HZSW0016	HZSW0016S005	12/19/2010	13:10	HVS-2B-1, -2	Downgradient	Secondary	Primary	Water		H	H			H	
008	HZSW0016	HZSW0016S005-RWQCB	12/19/2010	13:10	HVS-2B-1, -2	Downgradient	Secondary	RWQCB Split	Water		H	H			H	
008	HZSW0018	HZSW0018S005	12/19/2010	13:12	HVS-2A	Downgradient	Secondary	Primary	Water			H			H	
008	HZSW0018	HZSW0018S005-RWQCB	12/19/2010	13:12	HVS-2A	Downgradient	Secondary	RWQCB Split	Water			H			H	
008	HZSW0019	HZSW0019S002	12/19/2010	13:10	CYN-1	Downgradient	Secondary	Primary	Water		H	H			H	
008	HZSW0019	HZSW0019S002-RWQCB	12/19/2010	13:10	CYN-1	Downgradient	Secondary	RWQCB Split	Water		H	H			H	
008	HZSW0005	HZSW0005S004	12/22/2010	9:37	DRG-1	Upgradient	Primary	Primary	Water					H	H	
008	HZSW0005	HZSW0005S004-RWQCB	12/22/2010	9:37	DRG-1	Upgradient	Primary	RWQCB Split	Water					H	H	
008	HZSW0008	HZSW0008S001	12/22/2010	13:40	HVS-1	Upgradient	Primary	Primary	Water			X		X	X	
008	HZSW0008	HZSW0008S001-RWQCB	12/22/2010	13:40	HVS-1	Upgradient	Primary	RWQCB Split	Water			X		X	X	
008	HZSW0011	HZSW0011S002	12/22/2010	12:10	HVS-3	Upgradient	Primary	Primary	Water		X			X	X	
008	HZSW0011	HZSW0011S002-RWQCB	12/22/2010	12:10	HVS-3	Upgradient	Primary	RWQCB Split	Water		X			X	X	
008	HZSW0014	HZSW0014S002	12/22/2010	11:15	HVS-2B-1, -2B-2	Upgradient	Primary	Primary	Water		X	X			X	
008	HZSW0014	HZSW0014S002-RWQCB	12/22/2010	11:15	HVS-2B-1, -2B-2	Upgradient	Primary	RWQCB Split	Water		X	X			X	
008	HZSW0020	HZSW0020S001	12/22/2010	11:30	HVS-2A, -2D	Upgradient	Primary	Primary	Water			X		X	X	
008	HZSW0020	HZSW0020S001-RWQCB	12/22/2010	11:30	HVS-2A, -2D	Upgradient	Primary	RWQCB Split	Water			X		X	X	
008	HZSW0003	HZSW0003S007	12/26/2010	9:30	CYN-1, DRG-1	Downgradient	Primary	Primary	Water		X	X		X	X	
008	HZSW0003	HZSW0003S007-RWQCB	12/26/2010	9:30	CYN-1, DRG-1	Downgradient	Primary	RWQCB Split	Water		X	X		X	X	
008	HZSW0004	HZSW0004S004	12/26/2010	10:15	DRG-1	Downgradient	Secondary	Primary	Water					H	H	
008	HZSW0004	HZSW0004S004-RWQCB	12/26/2010	10:15	DRG-1	Downgradient	Secondary	RWQCB Split	Water					H	H	
008	HZSW0005	HZSW0005S005	12/26/2010	9:50	DRG-1	Upgradient	Primary	Primary	Water					H	H	
008	HZSW0005	HZSW0005S005-RWQCB	12/26/2010	9:50	DRG-1	Upgradient	Primary	RWQCB Split	Water					H	H	
008	HZSW0007	HZSW0007S006	12/26/2010	11:00	all HVS	Downgradient	Primary	Primary	Water		X	X		X	X	
008	HZSW0007	HZSW0007S006-RWQCB	12/26/2010	11:00	all HVS	Downgradient	Primary	RWQCB Split	Water		X	X		X	X	
008	HZSW0016	HZSW0016S006	12/26/2010	11:45	HVS-2B-1, -2	Downgradient	Secondary	Primary	Water		H	H			H	
008	HZSW0016	HZSW0016S006-RWQCB	12/26/2010	11:45	HVS-2B-1, -2	Downgradient	Secondary	RWQCB Split	Water		H	H			H	
008	HZSW0003	HZSW0003S008	12/29/2010	8:45	CYN-1, DRG-1	Downgradient	Primary	Primary	Water		X	X		X	X	
008	HZSW0003	HZSW0003S008-RWQCB	12/29/2010	8:45	CYN-1, DRG-1	Downgradient	Primary	RWQCB Split	Water		X	X		1	X	
008	HZSW0004	HZSW0004S005	12/29/2010	9:05	DRG-1	Downgradient	Secondary	Primary	Water					H	H	

Table 2-3
ISRA Performance Monitoring Sample Collection Matrix
2010-2011 Rainy Season
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Watershed	Object ID	Sample ID	Collection Date	Collection Time	Location	Position	Position Type	Sample Type	Matrix	Cadmium (Total Recoverable) (Method 200.8)	Copper (Total Recoverable) (Method 200.8)	Lead (Total Recoverable) (Method 200.8)	Mercury (Total Recoverable) (Method 245.1)	Dioxins (Method 1613)	Total Suspended Solids (Method 2540)	Comments
008	HZSW0004	HZSW0004S005-RWQCB	12/29/2010	9:05	DRG-1	Downgradient	Secondary	RWQCB Split	Water					H	H	
008	HZSW0005	HZSW0005S006	12/29/2010	9:20	DRG-1	Upgradient	Primary	Primary	Water					H	H	
008	HZSW0005	HZSW0005S006-RWQCB	12/29/2010	9:20	DRG-1	Upgradient	Primary	RWQCB Split	Water					1	H	
008	HZSW0007	HZSW0007S007	12/29/2010	9:40	all HVS	Downgradient	Primary	Primary	Water		X	X		X	X	
008	HZSW0007	HZSW0007S007-RWQCB	12/29/2010	9:40	all HVS	Downgradient	Primary	RWQCB Split	Water		X	X		X	X	
008	HZSW0016	HZSW0016S007	12/29/2010	10:00	HVS-2B-1, -2	Downgradient	Secondary	Primary	Water		H	H			H	
008	HZSW0016	HZSW0016S007-RWQCB	12/29/2010	10:00	HVS-2B-1, -2	Downgradient	Secondary	RWQCB Split	Water		H	H			H	
008	HZSW0018	HZSW0018S006	12/29/2010	10:10	HVS-2A	Downgradient	Secondary	Primary	Water			H			H	
008	HZSW0018	HZSW0018S006-RWQCB	12/29/2010	10:10	HVS-2A	Downgradient	Secondary	RWQCB Split	Water			H			H	
008	HZSW0003	HZSW0003S009	1/3/2011	9:15	CYN-1, DRG-1	Downgradient	Primary	Primary	Water		X	X		X	X	
008	HZSW0003	HZSW0003S009-RWQCB	1/3/2011	9:15	CYN-1, DRG-1	Downgradient	Primary	RWQCB Split	Water		X	X		X	X	
008	HZSW0004	HZSW0004S006	1/3/2011	10:00	DRG-1	Downgradient	Secondary	Primary	Water					H	H	
008	HZSW0004	HZSW0004S006-RWQCB	1/3/2011	10:00	DRG-1	Downgradient	Secondary	RWQCB Split	Water					H	H	
008	HZSW0003	HZSW0003S010	2/26/2011	9:00	CYN-1, DRG-1	Downgradient	Primary	Primary	Water		X	X		X	X	
008	HZSW0003	HZSW0003S010-RWQCB	2/26/2011	9:00	CYN-1, DRG-1	Downgradient	Primary	RWQCB Split	Water		X	X		X	X	D
008	HZSW0007	HZSW0007S008	2/26/2011	11:10	all HVS	Downgradient	Primary	Primary	Water		X	X		X	X	
008	HZSW0007	HZSW0007S008-RWQCB	2/26/2011	11:10	all HVS	Downgradient	Primary	RWQCB Split	Water		X	X		X	X	D
008	HZSW0016	HZSW0016S008	2/26/2011	10:45	HVS-2B-1, -2	Downgradient	Secondary	Primary	Water		H	H			H	
008	HZSW0003	HZSW0003S011	3/21/2011	8:45	CYN-1, DRG-1	Downgradient	Primary	Primary	Water		X	X		X	X	V
008	HZSW0003	HZSW0003S011-RWQCB	3/21/2011	8:45	CYN-1, DRG-1	Downgradient	Primary	RWQCB Split	Water		X	X		X	X	D
008	HZSW0004	HZSW0004S007	3/21/2011	9:45	DRG-1	Downgradient	Secondary	Primary	Water					H	H	
008	HZSW0004	HZSW0004S007-RWQCB	3/21/2011	9:45	DRG-1	Downgradient	Secondary	RWQCB Split	Water					H	H	
008	HZSW0005	HZSW0005S007	3/21/2011	10:05	DRG-1	Upgradient	Primary	Primary	Water					H	H	
008	HZSW0005	HZSW0005S007-RWQCB	3/21/2011	10:05	DRG-1	Upgradient	Primary	RWQCB Split	Water					1	H	
008	HZSW0007	HZSW0007S009	3/21/2011	10:45	all HVS	Downgradient	Primary	Primary	Water		X	X		X	X	V
008	HZSW0007	HZSW0007S009-RWQCB	3/21/2011	10:45	all HVS	Downgradient	Primary	RWQCB Split	Water		X	X		X	X	D
008	HZSW0016	HZSW0016S009	3/21/2011	11:20	HVS-2B-1, -2	Downgradient	Secondary	Primary	Water		H	H			H	
008	HZSW0018	HZSW0018S007	3/21/2011	11:50	HVS-2A	Downgradient	Secondary	Primary	Water			H			H	
008	HZSW0010	HZSW0010S005	3/25/2011	9:30	HVS-3, -4	Downgradient	Secondary	Primary	Water		H			H	H	
009	A1SW0004	A1SW0004S009	10/6/2010	10:09	CM-9	Upgradient	Primary	Primary	Water	X	X	X	X	X	X	
009	A2SW0001	A2SW0001S005	10/6/2010	9:36	A2LF-3	Upgradient	Primary	Primary	Water			X		X	X	
009	A2SW0002	A2SW0002S007	10/6/2010	9:48	A2LF-3	Downgradient	Primary	Primary	Water			X		X	X	
009	A1SW0004	A1SW0004S010	12/18/2010	9:23	CM-9	Upgradient	Primary	Primary	Water	X	X	X	X	X	X	
009	A1SW0004	A1SW0004S010-RWQCB	12/18/2010	9:23	CM-9	Upgradient	Primary	RWQCB Split	Water	X	X	X	X	X	X	
009	A1SW0005	A1SW0005S006	12/18/2010	8:42	CM-9	Downgradient	Primary	Primary	Water	X	X	X	X	X	X	
009	A1SW0005	A1SW0005S006-RWQCB	12/18/2010	8:42	CM-9	Downgradient	Primary	RWQCB Split	Water	X	X	X	X	X	X	
009	A1SW0002	A1SW0002S006	12/19/2010	12:11	CM-8	Upgradient	Primary	Primary	Water			X			X	

Table 2-3
ISRA Performance Monitoring Sample Collection Matrix
2010-2011 Rainy Season
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Watershed	Object ID	Sample ID	Collection Date	Collection Time	Location	Position	Position Type	Sample Type	Matrix	Cadmium (Total Recoverable) (Method 200.8)	Copper (Total Recoverable) (Method 200.8)	Lead (Total Recoverable) (Method 200.8)	Mercury (Total Recoverable) (Method 245.1)	Dioxins (Method 1613)	Total Suspended Solids (Method 2540)	Comments
009	A1SW0002	A1SW0002S006-RWQCB	12/19/2010	12:11	CM-8	Upgradient	Primary	RWQCB Split	Water			X			X	
009	A1SW0003	A1SW0003S005	12/19/2010	12:03	CM-8	Downgradient	Primary	Primary	Water			X			X	
009	A1SW0003	A1SW0003S005-RWQCB	12/19/2010	12:03	CM-8	Downgradient	Primary	RWQCB Split	Water			X			X	
009	A1SW0006	A1SW0006S006	12/19/2010	11:27	CM-11	Upgradient	Primary	Primary	Water					X	X	
009	A1SW0006	A1SW0006S006-RWQCB	12/19/2010	11:27	CM-11	Upgradient	Primary	RWQCB Split	Water					X	X	
009	A1SW0007	A1SW0007S005	12/19/2010	10:55	CM-11	Downgradient	Primary	Primary	Water					X	X	
009	A1SW0007	A1SW0007S005-RWQCB	12/19/2010	10:55	CM-11	Downgradient	Primary	RWQCB Split						X	X	
009	A2SW0001	A2SW0001S006	12/19/2010	9:41	A2LF-3	Upgradient	Primary	Primary				X		X	X	
009	A2SW0001	A2SW0001S006-RWQCB	12/19/2010	9:41	A2LF-3	Upgradient	Primary	RWQCB Split				X		X	X	
009	A2SW0002	A2SW0002S008	12/19/2010	8:57	A2LF-3	Downgradient	Primary	Primary				X		X	X	
009	A2SW0002	A2SW0002S008-RWQCB	12/19/2010	8:57	A2LF-3	Downgradient	Primary	RWQCB Split				X		X	X	
009	LXSW0001	LXSW0001S003	12/20/2010	11:30	CM-3	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	LXSW0001	LXSW0001S003-RWQCB	12/20/2010	11:30	CM-3	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	
009	LXSW0002	LXSW0002S004	12/20/2010	11:45	CM-3	Downgradient	Primary	Primary		X	X	X	X	X	X	
009	LXSW0002	LXSW0002S004-RWQCB	12/20/2010	11:45	CM-3	Downgradient	Primary	RWQCB Split		X	X	X	X	X	X	
009	A2SW0007	A2SW0007S001	12/22/2010	9:39	A2LF-3	Upgradient	Primary	Primary				X		X	X	
009	A2SW0007	A2SW0007S001-RWQCB	12/22/2010	9:39	A2LF-3	Upgradient	Primary	RWQCB Split				X		X	X	
009	A2SW0006	A2SW0006S005	12/26/2010	9:54	A2LF-3	Upgradient	Primary	Primary				X		X	X	
009	A2SW0006	A2SW0006S005-RWQCB	12/26/2010	9:54	A2LF-3	Upgradient	Primary	RWQCB Split				X		X	X	
009	A2SW0002	A2SW0002S009	12/26/2010	9:19	A2LF-3	Downgradient	Primary	Primary				X		X	X	
009	A2SW0002	A2SW0002S009-RWQCB	12/26/2010	9:19	A2LF-3	Downgradient	Primary	RWQCB Split				X		X	X	
009	A1SW0002	A1SW0002S007	12/26/2010	11:38	CM-8	Upgradient	Primary	Primary				X			X	
009	A1SW0002	A1SW0002S007-RWQCB	12/26/2010	11:38	CM-8	Upgradient	Primary	RWQCB Split				X			X	
009	A1SW0003	A1SW0003S006	12/26/2010	11:23	CM-8	Downgradient	Primary	Primary				X			X	
009	A1SW0003	A1SW0003S006-RWQCB	12/26/2010	11:23	CM-8	Downgradient	Primary	RWQCB Split				X			X	
009	A1SW0004	A1SW0004S011	12/26/2010	12:18	CM-9	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	A1SW0004	A1SW0004S011-RWQCB	12/26/2010	12:18	CM-9	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	
009	A1SW0006	A1SW0006S007	12/26/2010	11:06	CM-11	Upgradient	Primary	Primary						X	X	
009	A1SW0006	A1SW0006S007-RWQCB	12/26/2010	11:06	CM-11	Upgradient	Primary	RWQCB Split						X	X	
009	A1SW0007	A1SW0007S006	12/26/2010	10:51	CM-11	Downgradient	Primary	Primary						X	X	
009	A1SW0007	A1SW0007S006-RWQCB	12/26/2010	10:51	CM-11	Downgradient	Primary	RWQCB Split						X	X	
009	LXSW0001	LXSW0001S004	12/26/2010	11:30	CM-3	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	LXSW0001	LXSW0001S004-RWQCB	12/26/2010	11:30	CM-3	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	
009	LXSW0002	LXSW0002S005	12/26/2010	10:15	CM-3	Downgradient	Primary	Primary		X	X	X	X	X	X	
009	LXSW0002	LXSW0002S005-RWQCB	12/26/2010	10:15	CM-3	Downgradient	Primary	RWQCB Split		X	X	X	X	1	X	
009	A2SW0006	A2SW0006S006	12/29/2010	8:59	A2LF-3	Upgradient	Primary	Primary				X		X	X	
009	A2SW0006	A2SW0006S006-RWQCB	12/29/2010	8:59	A2LF-3	Upgradient	Primary	RWQCB Split				X		1	X	
009	A2SW0001	A2SW0001S007	12/29/2010	8:40	A2LF-3	Upgradient	Primary	Primary				X		X	X	
009	A2SW0001	A2SW0001S007-RWQCB	12/29/2010	8:40	A2LF-3	Upgradient	Primary	RWQCB Split				X		1	X	
009	A2SW0002	A2SW0002S010	12/29/2010	8:09	A2LF-3	Downgradient	Primary	Primary				X		X	X	
009	A2SW0002	A2SW0002S010-RWQCB	12/29/2010	8:09	A2LF-3	Downgradient	Primary	RWQCB Split				X		X	X	

Table 2-3
ISRA Performance Monitoring Sample Collection Matrix
2010-2011 Rainy Season
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Watershed	Object ID	Sample ID	Collection Date	Collection Time	Location	Position	Position Type	Sample Type	Matrix	Cadmium (Total Recoverable) (Method 200.8)	Copper (Total Recoverable) (Method 200.8)	Lead (Total Recoverable) (Method 200.8)	Mercury (Total Recoverable) (Method 245.1)	Dioxins (Method 1613)	Total Suspended Solids (Method 2540)	Comments
009	A1SW0002	A1SW0002S008	12/29/2010	10:56	CM-8	Upgradient	Primary	Primary				X			X	
009	A1SW0002	A1SW0002S008-RWQCB	12/29/2010	10:56	CM-8	Upgradient	Primary	RWQCB Split				X			X	
009	A1SW0003	A1SW0003S007	12/29/2010	10:43	CM-8	Downgradient	Primary	Primary				X			X	
009	A1SW0003	A1SW0003S007-RWQCB	12/29/2010	10:43	CM-8	Downgradient	Primary	RWQCB Split				X			X	
009	A1SW0004	A1SW0004S012	12/29/2010	12:07	CM-9	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	A1SW0004	A1SW0004S012-RWQCB	12/29/2010	12:07	CM-9	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	
009	A1SW0005	A1SW0005S007	12/29/2010	11:39	CM-9	Downgradient	Primary	Primary		X	X	X	X	X	X	
009	A1SW0005	A1SW0005S007-RWQCB	12/29/2010	8:42	CM-9	Downgradient	Primary	RWQCB Split		X	X	X	X	1	X	
009	A1SW0006	A1SW0006S008	12/29/2010	10:25	CM-11	Upgradient	Primary	Primary						X	X	
009	A1SW0006	A1SW0006S008-RWQCB	12/29/2010	10:25	CM-11	Upgradient	Primary	RWQCB Split						X	X	
009	A1SW0007	A1SW0007S007	12/29/2010	10:08	CM-11	Downgradient	Primary	Primary						X	X	
009	A1SW0007	A1SW0007S007-RWQCB	12/29/2010	10:08	CM-11	Downgradient	Primary	RWQCB Split						1	X	
009	LXSW0001	LXSW0001S005	12/29/2010	9:52	CM-3	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	LXSW0001	LXSW0001S005-RWQCB	12/29/2010	9:52	CM-3	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	
009	LXSW0002	LXSW0002S006	12/29/2010	9:32	CM-3	Downgradient	Primary	Primary		X	X	X	X	X	X	
009	LXSW0002	LXSW0002S006-RWQCB	12/29/2010	9:32	CM-3	Downgradient	Primary	RWQCB Split		X	X	X	X	1	X	
009	A2SW0006	A2SW0006S007	1/3/2011	10:21	A2LF-3	Upgradient	Primary	Primary				X		X	X	
009	A2SW0006	A2SW0006S007-RWQCB	1/3/2011	10:21	A2LF-3	Upgradient	Primary	RWQCB Split				X		X	X	
009	A2SW0002	A2SW0002S011	1/3/2011	9:41	A2LF-3	Downgradient	Primary	Primary				X		X	X	
009	A2SW0002	A2SW0002S011-RWQCB	1/3/2011	9:41	A2LF-3	Downgradient	Primary	RWQCB Split				X		X	X	
009	A1SW0002	A1SW0002S009	1/3/2011	14:21	CM-8	Upgradient	Primary	Primary				X			X	
009	A1SW0002	A1SW0002S009-RWQCB	1/3/2011	14:21	CM-8	Upgradient	Primary	RWQCB Split				X			X	
009	A1SW0003	A1SW0003S008	1/3/2011	14:12	CM-8	Downgradient	Primary	Primary				X			X	
009	A1SW0003	A1SW0003S008-RWQCB	1/3/2011	14:12	CM-8	Downgradient	Primary	RWQCB Split				X			X	
009	A1SW0004	A1SW0004S013	1/3/2011	14:20	CM-9	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	A1SW0004	A1SW0004S013-RWQCB	1/3/2011	14:20	CM-9	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	
009	A1SW0006	A1SW0006S009	1/3/2011	13:24	CM-11	Upgradient	Primary	Primary						X	X	
009	A1SW0006	A1SW0006S009-RWQCB	1/3/2011	13:24	CM-11	Upgradient	Primary	RWQCB Split						X	X	
009	A1SW0007	A1SW0007S008	1/3/2011	13:11	CM-11	Downgradient	Primary	Primary						X	X	
009	A1SW0007	A1SW0007S008-RWQCB	1/3/2011	13:11	CM-11	Downgradient	Primary	RWQCB Split						X	X	
009	LXSW0001	LXSW0001S006	1/3/2011	12:27	CM-3	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	LXSW0001	LXSW0001S006-RWQCB	1/3/2011	12:27	CM-3	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	
009	LXSW0002	LXSW0002S007	1/3/2011	11:41	CM-3	Downgradient	Primary	Primary		X	X	X	X	X	X	
009	LXSW0002	LXSW0002S007-RWQCB	1/3/2011	11:41	CM-3	Downgradient	Primary	RWQCB Split		X	X	X	X		X	
009	A2SW0002	A2SW0002S012	2/16/2011	12:23	A2LF-3	Downgradient	Primary	Primary				H		H	H	
009	A2SW0002	A2SW0002S012--RWQCB	2/16/2011	12:23	A2LF-3	Downgradient	Primary	RWQCB Split				X		H	X	
009	B1SW0010	B1SW0010S001	2/16/2011	12:15	all B-1	Downgradient	Primary	Primary		X	X	X	X	X	X	
009	B1SW0010	B1SW0010S001--RWQCB	2/16/2011	12:15	all B-1	Downgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	B1SW0011	B1SW0011S001	2/16/2011	12:50	B1-2	Upgradient	Primary	Primary		H	H	H	H	H	H	
009	B1SW0011	B1SW0011S001--RWQCB	2/16/2011	12:50	B1-2	Upgradient	Primary	RWQCB Split		X	X	X	X	H	X	
009	A1SW0004	A1SW0004S014	2/19/2011	11:10	CM-9	Upgradient	Primary	Primary		X	X	X	X	2	X	

Table 2-3
ISRA Performance Monitoring Sample Collection Matrix
2010-2011 Rainy Season
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Watershed	Object ID	Sample ID	Collection Date	Collection Time	Location	Position	Position Type	Sample Type	Matrix	Cadmium (Total Recoverable) (Method 200.8)	Copper (Total Recoverable) (Method 200.8)	Lead (Total Recoverable) (Method 200.8)	Mercury (Total Recoverable) (Method 245.1)	Dioxins (Method 1613)	Total Suspended Solids (Method 2540)	Comments
009	A1SW0004	A1SW0004S014-RWQCB	2/19/2011	11:10	CM-9	Upgradient	Primary	RWQCB Split		X	X	X	X	2	X	
009	A1SW0007	A1SW0007S009	2/19/2011	10:19	CM-11	Downgradient	Primary	Primary						X	X	
009	A1SW0007	A1SW0007S009-RWQCB	2/19/2011	10:19	CM-11	Downgradient	Primary	RWQCB Split						X	X	D
009	A1SW0005	A1SW0005S008	2/19/2011	10:30	CM-9	Downgradient	Primary	Primary		X	X	X	X	X	X	
009	A1SW0005	A1SW0005S008-RWQCB	2/19/2011	10:30	CM-9	Downgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	B1SW0011	B1SW0011S002	2/19/2011	8:40	B1-2	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	B1SW0011	B1SW0011S002--RWQCB	2/19/2011	8:40	B1-2	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	A2SW0002	A2SW0002S013	2/19/2011	9:50	A2LF-3	Downgradient	Primary	Primary				X		X	X	
009	A2SW0002	A2SW0002S013--RWQCB	2/19/2011	9:50	A2LF-3	Downgradient	Primary	RWQCB Split				X		X	X	D
009	LXSW0001	LXSW0001S007	2/26/2011	10:15	CM-3	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	LXSW0001	LXSW0001S007-RWQCB	2/26/2011	10:15	CM-3	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	LXSW0002	LXSW0002S008	2/26/2011	9:45	CM-3	Downgradient	Primary	Primary		X	X	X	X	X	X	
009	LXSW0002	LXSW0002S008-RWQCB	2/26/2011	9:45	CM-3	Downgradient	Primary	RWQCB Split		X	X	X	X		X	D
009	A1SW0002	A1SW0002S010	2/26/2011	14:02	CM-8	Upgradient	Primary	Primary				X			X	
009	A1SW0002	A1SW0002S010-RWQCB	2/26/2011	14:02	CM-8	Upgradient	Primary	RWQCB Split				X			X	D
009	A1SW0003	A1SW0003S009	2/26/2011	13:56	CM-8	Downgradient	Primary	Primary				X			X	
009	A1SW0003	A1SW0003S009-RWQCB	2/26/2011	14:12	CM-8	Downgradient	Primary	RWQCB Split				X			X	D
009	A1SW0004	A1SW0004S015	2/26/2011	14:30	CM-9	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	A1SW0004	A1SW0004S015-RWQCB	2/26/2011	11:10	CM-9	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	A1SW0005	A1SW0005S009	2/26/2011	14:32	CM-9	Downgradient	Primary	Primary		X	X	X	X	X	X	
009	A1SW0005	A1SW0005S009-RWQCB	2/26/2011	14:32	CM-9	Downgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	A1SW0006	A1SW0006S010	2/26/2011	12:30	CM-11	Upgradient	Primary	Primary						X	X	
009	A1SW0006	A1SW0006S010-RWQCB	2/26/2011	12:30	CM-11	Upgradient	Primary	RWQCB Split						X	X	D
009	A1SW0007	A1SW0007S010	2/26/2011	12:50	CM-11	Downgradient	Primary	Primary						X	X	
009	A1SW0007	A1SW0007S010-RWQCB	2/26/2011	12:50	CM-11	Downgradient	Primary	RWQCB Split						X	X	D
009	B1SW0011	B1SW0011S003	2/26/2011	9:27	B1-2	Upgradient	Primary	Primary		X	X	X	X	X	X	
009	B1SW0011	B1SW0011S003--RWQCB	2/26/2011	9:27	B1-2	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	B1SW0009	B1SW0009S001	2/26/2011	11:40	B1-1A	Downgradient	Secondary	Primary		H				H	H	
009	A2SW0007	A2SW0007S002	2/26/2011	9:50	A2LF-3	Upgradient	Primary	Primary				X		X	X	
009	A2SW0007	A2SW0007S002--RWQCB	2/26/2011	9:50	A2LF-3	Upgradient	Primary	RWQCB Split				X		X	X	
009	A2SW0002	A2SW0002S014	2/26/2011	9:05	A2LF-3	Downgradient	Primary	Primary				X		X	X	
009	A2SW0002	A2SW0002S014--RWQCB	2/26/2011	9:05	A2LF-3	Downgradient	Primary	RWQCB Split				X		X	X	D
009	A1SW0006	A1SW0006S011	3/7/2011	13:10	CM-11	Upgradient	Primary	Primary						X	X	
009	A1SW0006	A1SW0006S011-RWQCB	3/7/2011	13:10	CM-11	Upgradient	Primary	RWQCB Split						X	X	D
009	A1SW0007	A1SW0007S011	3/7/2011	14:06	CM-11	Downgradient	Primary	Primary						X	X	
009	A1SW0007	A1SW0007S011-RWQCB	3/7/2011	14:06	CM-11	Downgradient	Primary	RWQCB Split						X	X	D
009	A2SW0007	A2SW0007S003	3/21/2011	9:20	A2LF-3	Upgradient	Primary	Primary				X		X	X	V
009	A2SW0007	A2SW0007S003-RWQCB	3/21/2011	9:20	A2LF-3	Upgradient	Primary	RWQCB Split				X		X	X	D
009	A2SW0002	A2SW0002S015	3/21/2011	8:46	A2LF-3	Downgradient	Primary	Primary				X		X	X	V
009	A2SW0002	A2SW0002S015-RWQCB	3/21/2011	8:46	A2LF-3	Downgradient	Primary	RWQCB Split				X		X	X	D
009	LXSW0002	LXSW0002S009	3/21/2011	10:46	CM-3	Downgradient	Primary	Primary		X	X	X	X	X	X	V

**Table 2-3
ISRA Performance Monitoring Sample Collection Matrix
2010-2011 Rainy Season
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Watershed	Object ID	Sample ID	Collection Date	Collection Time	Location	Position	Position Type	Sample Type	Matrix	Cadmium (Total Recoverable) (Method 200.8)	Copper (Total Recoverable) (Method 200.8)	Lead (Total Recoverable) (Method 200.8)	Mercury (Total Recoverable) (Method 245.1)	Dioxins (Method 1613)	Total Suspended Solids (Method 2540)	Comments
009	LXSW0002	LXSW0002S009-RWQCB	3/21/2011	10:46	CM-3	Downgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	LXSW0003	LXSW0003S001	3/21/2011	11:02	CM-3	Upgradient	Primary	Primary		X	X	X	X	X	X	V
009	LXSW0003	LXSW0003S001-RWQCB	3/21/2011	11:02	CM-3	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	A1SW0002	A1SW0002S011	3/21/2011	13:20	CM-8	Upgradient	Primary	Primary				X			X	V
009	A1SW0002	A1SW0002S011-RWQCB	3/21/2011	13:20	CM-8	Upgradient	Primary	RWQCB Split				X			X	D
009	A1SW0003	A1SW0003S010	3/21/2011	13:03	CM-8	Downgradient	Primary	Primary				X			X	V
009	A1SW0003	A1SW0003S010-RWQCB	3/21/2011	13:03	CM-8	Downgradient	Primary	RWQCB Split				X			X	D
009	A1SW0004	A1SW0004S016	3/21/2011	14:09	CM-9	Upgradient	Primary	Primary		X	X	X	X	X	X	V
009	A1SW0004	A1SW0004S016-RWQCB	3/21/2011	14:09	CM-9	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	A1SW0005	A1SW0005S010	3/21/2011	13:06	CM-9	Downgradient	Primary	Primary		X	X	X	X	X	X	V
009	A1SW0005	A1SW0005S010-RWQCB	3/21/2011	13:06	CM-9	Downgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	A1SW0006	A1SW0006S012	3/21/2011	11:47	CM-11	Upgradient	Primary	Primary						X	X	V
009	A1SW0006	A1SW0006S012-RWQCB	3/21/2011	11:47	CM-11	Upgradient	Primary	RWQCB Split						X	X	D
009	A1SW0007	A1SW0007S012	3/21/2011	11:27	CM-11	Downgradient	Primary	Primary						X	X	V
009	A1SW0007	A1SW0007S012-RWQCB	3/21/2011	11:27	CM-11	Downgradient	Primary	RWQCB Split						X	X	D
009	B1SW0002	B1SW0002S001	3/21/2011	10:50	B1-2	Upgradient	Primary	Primary		X	X	X	X	X	X	V
009	B1SW0002	B1SW0002S001--RWQCB	3/21/2011	10:50	B1-2	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	B1SW0009	B1SW0009S002	3/21/2011	12:35	B1-1A	Downgradient	Secondary	Primary		H				H	H	
009	B1SW0010	B1SW0010S002	3/21/2011	9:58	all B-1	Downgradient	Primary	Primary		X	X	X	X	X	X	V
009	B1SW0010	B1SW0010S002--RWQCB	3/21/2011	9:58	all B-1	Downgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	B1SW0011	B1SW0011S004	3/21/2011	9:27	B1-2	Upgradient	Primary	Primary		X	X	X	X	X	X	V
009	B1SW0011	B1SW0011S004--RWQCB	3/21/2011	9:27	B1-2	Upgradient	Primary	RWQCB Split		X	X	X	X	X	X	D
009	LFSW0002	LFSW0002S001	3/25/2011	11:03	CTLI-1A, -1B	Downgradient	Primary	Primary		X	X	X	X	X	X	
009	LFSW0002	LFSW0002S001--RWQCB	3/25/2011	11:03	CTLI-1A, -1B	Downgradient	Primary	RWQCB Split		X	X	X	X	X	X	D

Notes:

- 1 - Bottle for dioxins analysis broke during shipment, or not submitted.
- 2 - Dioxins not analyzed due to laboratory error.
- D - RWQCB split collected using Dekaport sample splitter
- H - Sample was collected and put on hold, and not analyzed.
- RWQCB - Regional Water Quality Control Board
- V - Level IV data validation performed
- X - Sample was analyzed.

Sample Totals

008 Primary	35
008 Primary - On Hold	20
009 Primary	80
009 Primary - On Hold	4
Primary - Collected	115
Primary - On Hold	24
RWQCB Split - Collected	106
RWQCB Split - On Hold	16
Total Performance Monitoring	221

Table 2-4a
ISRA Performance Monitoring Sample Results, Outfall 008 Watershed
2010-2011 Rainy Season
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		Object Name:	HZSW0008	HZSW0008	HZSW0011	HZSW0011	HZSW0014	HZSW0014	HZSW0020
		Sample Name:	HZSW0008S001	HZSW0008S001-RWQCB	HZSW0011S002	HZSW0011S002-RWQCB	HZSW0014S002	HZSW0014S002-RWQCB	HZSW0020S001
		Sample Date:	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	UG (HVS-1)	UG (HVS-1)	UG (HVS-3)	UG (HVS-3)	UG (HVS-2B-1, -2)	UG (HVS-2B-1, -2)	UG (HVS-2A, -2D)
		Rain Event:	December 17-22, 2010						
ANALYTE	UNITS	NPDES Permit Limit	RESULT						
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	2.13E-09	2.50E-10 *	7.02E-09	1.30E-10 *	--	--	4.02E-09
INORGANICS									
Copper	µg/L	14	--	--	3.0 *	1.9 *	6.4 *	5.1 *	--
Lead	µg/L	5.2	0.40 Ja*	0.37 *	--	--	3.1 *	0.99 *	5.3 *
MISCELANEOUS									
Total Suspended Solids	mg/L	-	28 *	17.0 *	2.0 Ja*	219 *	70 *	227 *	69 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.076 *	--	0.076 *	--	0.108 *	--	0.074 *
pH (Field)	pH Units	6.5 - 8.5	6.82 *	--	6.47 *	--	6.79 *	--	6.07 *
Temperature	°C	30	11.3 *	--	13.5 *	--	12.7 *	--	10.0 *
Turbidity (Field)	NTU	-	99 *	--	88 *	--	94 *	--	88 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.054	0.054	0.054	0.054	0.053	0.053	0.053
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.054	0.054	0.054	0.054	0.054	0.054
Intensity (Max) - Pre-Sampling	in/hr	-	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Intensity (Max) - Rain Event	in/hr	-	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Total - Pre-Sampling	in	-	7.2	7.2	7.03	7.03	6.86	6.86	6.9
Total - Rain Event	in	-	7.22	7.22	7.22	7.22	7.22	7.22	7.22

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-4a
ISRA Performance Monitoring Sample Results, Outfall 008 Watershed
2010-2011 Rainy Season
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		Object Name:	HZSW0020	HZSW0007	HZSW0007	HZSW0007	HZSW0007	HZSW0007	HZSW0007
		Sample Name:	HZSW0020S001-RWQCB	HZSW0007S005	HZSW0007S005-RWQCB	HZSW0007S006	HZSW0007S006-RWQCB	HZSW0007S007	HZSW0007S007-RWQCB
		Sample Date:	12/22/2010	12/19/2010	12/19/2010	12/26/2010	12/26/2010	12/29/2010	12/29/2010
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	UG (HVS-2A, -2D)	DG (HVS)	DG (HVS)	DG (HVS)	DG (HVS)	DG (HVS)	DG (HVS)
		Rain Event:	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 25-26, 2010	December 25-26, 2010	December 29, 2010	December 29, 2010
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND *	1.30E-10	1.40E-10	1.80E-09	ND	ND	ND
INORGANICS									
Copper	µg/L	14	--	5.7 *	4.6 *	2.6 *	3.1 *	3.5 *	3.5 *
Lead	µg/L	5.2	1.7 *	4.1 *	2.8 *	<0.20 *	<0.017 *	1.1 *	0.89 *
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	1120 *	210 *	147 *	1.0 Ja*	<5.00 *	15 *	16.0 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	--	0.149 *	--	0.424 *	--	0.514 *	--
pH (Field)	pH Units	6.5 - 8.5	--	7.50 *	--	7.12 *	--	7.60 *	--
Temperature	°C	30	--	13.5 *	--	11.4 *	--	10.2 *	--
Turbidity (Field)	NTU	-	--	279 *	--	0 *	--	31 *	--
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.053	0.058	0.058	0.034	0.034	0.064	0.064
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.054	0.054	0.03	0.03	0.043	0.043
Intensity (Max) - Pre-Sampling	in/hr	-	0.37	0.28	0.28	0.22	0.22	0.1	0.1
Intensity (Max) - Rain Event	in/hr	-	0.37	0.37	0.37	0.22	0.22	0.1	0.1
Total - Pre-Sampling	in	-	6.9	3.45	3.45	0.57	0.57	0.43	0.43
Total - Rain Event	in	-	7.22	7.22	7.22	0.57	0.57	0.43	0.43

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-4a
ISRA Performance Monitoring Sample Results, Outfall 008 Watershed
2010-2011 Rainy Season
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		Object Name:	HZSW0007	HZSW0007	HZSW0007	HZSW0007
		Sample Name:	HZSW0007S008	HZSW0007S008-RWQCB	HZSW0007S009	HZSW0007S009-RWQCB
		Sample Date:	2/26/2011	2/26/2011	3/21/2011	3/21/2011
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	DG (HVS)	DG (HVS)	DG (HVS)	DG (HVS)
		Rain Event:	February 25-26, 2011	February 25-26, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULTS	RESULTS
DIOXINS						
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND *	ND	ND
INORGANICS						
Copper	µg/L	14	4.6 B*	2.8 *	2.9	2.9
Lead	µg/L	5.2	0.48 Ja*	0.32 *	0.52 J	0.40
MISCELLANEOUS						
Total Suspended Solids	mg/L	-	23 *	21.0 *	6.0 J	<5.00 *
Turbidity	NTU	-	--	--	17 J	--
FIELD MEASUREMENTS						
Conductivity (Field)	mS	-	0.465 *	--	0.276 *	--
pH (Field)	pH Units	6.5 - 8.5	9.11	--	7.18 *	--
Temperature	°C	30	8.9 *	--	7.8 *	--
Turbidity (Field)	NTU	-	9 *	--	10 *	--
RAINFALL MEASUREMENTS †						
Intensity (Ave) - Pre-Sampling	in/hr	-	0.055	0.055	0.081	0.081
Intensity (Ave) - Rain Event	in/hr	-	0.048	0.048	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	0.26	0.26	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	0.26	0.26	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	1.5	1.5	4.81	4.81
Total - Rain Event	in	-	1.5	1.5	6.00	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-4b
ISRA Performance Monitoring Sample Results, Outfall 008 Watershed
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		Object Name:	HZSW0003	HZSW0003	HZSW0003	HZSW0003	HZSW0003	HZSW0003	HZSW0003
		Sample Name:	HZSW0003S006	HZSW0003S006-RWQCB	HZSW0003S007	HZSW0003S007-RWQCB	HZSW0003S008	HZSW0003S008-RWQCB	HZSW0003S009
		Sample Date:	12/19/2010	12/19/2010	12/26/2010	12/26/2010	12/29/2010	12/29/2010	1/3/2011
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)
		Rain Event:	December 17-22, 2010	December 17-22, 2010	December 25-26, 2010	December 25-26, 2010	December 29, 2010	December 29, 2010	January 2-3, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	4.49E-10	ND	4.50E-12	ND	2.19E-09	Note 1	4.82E-10
INORGANICS									
Copper	µg/L	14	2.1 *	1.7 *	1.7 Ja*	2.2 *	1.5 Ja*	1.6 *	1.4 J*
Lead	µg/L	5.2	0.68 Ja*	0.51 *	<0.20 *	<0.017 *	<0.20 *	<0.017 *	<0.20
MISCELANEOUS									
Total Suspended Solids	mg/L	-	13 *	<5.00 *	<1.0 *	<5.00 *	<1.0 *	<5.00 *	1.0 J*
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.066 *	--	0.176 *	--	0.225 *	--	0.239 *
pH (Field)	pH Units	6.5 - 8.5	6.54 *	--	7.41 *	--	7.67 *	--	7.82 *
Temperature	°C	30	12.5 *	--	11.5 *	--	9.7 *	--	8.2 *
Turbidity (Field)	NTU	-	10 *	--	94 *	--	1 *	--	1 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.051	0.051	0.037	0.037	0.072	0.072	0.017
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.054	0.03	0.03	0.043	0.043	0.014
Intensity (Max) - Pre-Sampling	in/hr	-	0.24	0.24	0.22	0.22	0.1	0.1	0.12
Intensity (Max) - Rain Event	in/hr	-	0.37	0.37	0.22	0.22	0.1	0.1	0.12
Total - Pre-Sampling	in	-	2.85	2.85	0.57	0.57	0.42	0.42	0.38
Total - Rain Event	in	-	7.22	7.22	0.57	0.57	0.43	0.43	0.38

Notes:

1 - Bottle for dioxins analysis broke during shipment.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-4b
ISRA Performance Monitoring Sample Results, Outfall 008 Watershed
2010-2011 Rainy Season
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		Object Name:	HZSW0003	HZSW0003	HZSW0003	HZSW0003	HZSW0003
		Sample Name:	HZSW0003S009-RWQCB	HZSW0003S010	HZSW0003S010-RWQCB	HZSW0003S011	HZSW0003S011-RWQCB
		Sample Date:	1/3/2011	2/26/2011	2/26/2011	3/21/2011	3/21/2011
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)	DG (CYN-1, DRG-1)
		Rain Event:	January 2-3, 2011	February 25-26, 2011	February 25-26, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULTS	RESULTS
DIOXINS							
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND	ND *	ND	ND
INORGANICS							
Copper	µg/L	14	1.4 *	4.1 B*	1.6 *	2.0	1.7
Lead	µg/L	5.2	<0.017 *	0.51 Ja*	0.38 *	0.64 J	0.42
MISCELLANEOUS							
Total Suspended Solids	mg/L	-	< 5.00 *	1.0 Ja*	<5.00 *	6.0 J	<5.00 *
Turbidity	NTU	-	--	--	--	14 J	--
FIELD MEASUREMENTS							
Conductivity (Field)	mS	-	--	0.181 *	--	0.133 *	--
pH (Field)	pH Units	6.5 - 8.5	--	8.93 *	--	6.33 *	--
Temperature	°C	30	--	8.7 *	--	10.3 *	--
Turbidity (Field)	NTU	-	--	7 *	--	10 *	--
RAINFALL MEASUREMENTS[†]							
Intensity (Ave) - Pre-Sampling	in/hr	-	0.017	0.055	0.055	0.083	0.083
Intensity (Ave) - Rain Event	in/hr	-	0.014	0.048	0.048	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	0.12	0.26	0.26	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	0.12	0.26	0.26	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	0.38	1.5	1.5	4.81	4.81
Total - Rain Event	in	-	0.38	1.5	1.5	6.00	6.00

Notes:

1 - Bottle for dioxins analysis broke during shipment.

[†] Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5a
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	B1SW0011	B1SW0011	B1SW0010	B1SW0010	B1SW0011	B1SW0011	B1SW0002
		Sample Name:	B1SW0011S002	B1SW0011S002-RWQCB	B1SW0010S001	B1SW0010S001-RWQCB	B1SW0011S003	B1SW0011S003-RWQCB	B1SW0002S001
		Sample Date:	2/19/2011	2/19/2011	2/16/2011	2/16/2011	2/26/2011	2/26/2011	3/21/2011
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	UG B1-2	UG B1-2	DG B1-2	DG B1-2	UG B1-2	UG B1-2	UG B1-2
		Rain Event:	February 16-20, 2011	February 16-20, 2011	February 16-20, 2011	February 16-20, 2011	February 25-26, 2011	February 25-26, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT						
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	1.70E-10	9.42E-11 *	2.93E-07	5.33E-08 *	2.60E-10	1.57E-10	ND
INORGANICS									
Cadmium	µg/L	4.0	<0.10 *	<0.013 *	0.77 RL1, J* (DNQ)	0.42 *	0.23 B, Ja*	<0.013 *	0.10 J
Copper	µg/L	14	2.3 *	2.6 *	27 *	17 *	5.3 *	2.8 *	3.3
Lead	µg/L	5.2	0.63 J*	0.58 *	11 *	4.2 *	2.3 *	1.4 *	1.6 J
Mercury	µg/L	0.13	<0.10 *	<0.100 *	<0.10 *	<0.10 *	<0.10 *	<0.100 *	<0.10 U
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	23 *	21.0 *	650 *	694 *	43 *	43.0 *	4.0 J
Turbidity	NTU	-	--	--	--	--	--	--	13 J
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.067 *	--	0.367 *	--	0.043 *	--	0.12 *
pH (Field)	pH Units	6.5 - 8.5	6.22 *	--	6.18 *	--	5.72 *	--	6.29 *\$
Temperature	°C	30	7.29 *	--	15.09 *	--	8.85 *	--	11.1 *
Turbidity (Field)	NTU	-	> limit *	--	> limit *	--	NR *	--	10 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.019	0.019	0.016	0.016	0.059	0.059	0.08
Intensity (Ave) - Rain Event	in/hr	-	0.019	0.019	0.019	0.019	0.048	0.048	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	0.45	0.45	0.11	0.11	0.26	0.26	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	0.45	0.45	0.45	0.45	0.26	0.26	Not Available (>0.4)
Total - Pre-Sampling	in	-	2.03	2.03	0.58	0.58	1.5	1.5	4.81
Total - Rain Event	in	-	2.33	2.33	2.33	2.33	1.5	1.5	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5a
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	B1SW0002	B1SW0011	B1SW0011	B1SW0010	B1SW0010
		Sample Name:	B1SW0002S001-RWQCB	B1SW0011S004	B1SW0011S004-RWQCB	B1SW0010S002	B1SW0010S002-RWQCB
		Sample Date:	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	UG B1-2	UG B1-2	UG B1-2	DG B1-2	DG B1-2
		Rain Event:	March 18-27, 2011				
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS							
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	2.08E-08	ND	1.20E-10	ND
INORGANICS							
Cadmium	µg/L	4.0	<0.013 U	<0.10 U	<0.013 U	0.17 J	0.14
Copper	µg/L	14	3.2	3.7	3.4	7.0	4.0
Lead	µg/L	5.2	1.3	1.6 J	1.2	5.9 J	2.4
Mercury	µg/L	0.13	<0.100 U	<0.10 U	<0.100 U	<0.10 U	<0.100 U
MISCELANEOUS							
Total Suspended Solids	mg/L	-	<5.00 *	25	31.0 *	180	182 *
Turbidity	NTU	-	--	52 J	--	200 J	--
FIELD MEASUREMENTS							
Conductivity (Field)	mS	-	--	0.103 *	--	0.113 *	--
pH (Field)	pH Units	6.5 - 8.5	--	6.66 *	--	6.43 *	--
Temperature	°C	30	--	10 *	--	10.5 *	--
Turbidity (Field)	NTU	-	--	22 *	--	20 *	--
RAINFALL MEASUREMENTS †							
Intensity (Ave) - Pre-Sampling	in/hr	-	0.08	0.082	0.082	0.082	0.082
Intensity (Ave) - Rain Event	in/hr	-	0.03	0.03	0.03	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)				
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)				
Total - Pre-Sampling	in	-	4.81	4.81	4.81	4.81	4.81
Total - Rain Event	in	-	6.00	6.00	6.00	6.00	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5b
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A1SW0004	A1SW0004	A1SW0004	A1SW0005	A1SW0005	A1SW0004	A1SW0004
		Sample Name:	A1SW0004S009	A1SW0004S010	A1SW0004S010-RWQCB	A1SW0005S006	A1SW0005S006-RWQCB	A1SW0004S011	A1SW0004S011-RWQCB
		Sample Date:	10/6/2010	12/18/2010	12/18/2010	12/18/2010	12/18/2010	12/26/2010	12/26/2010
		Sample Type:	Perf Mon	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	UG (CM-9, A1LF)	UG (CM-9, A1LF)	UG (CM-9, A1LF)	DG (CM-9, A1LF)	DG (CM-9, A1LF)	UG (CM-9, A1LF)	UG (CM-9, A1LF)
		Rain Event:	October 5-6, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 25-26, 2010	December 25-26, 2010
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	2.00E-08	2.07E-08	ND	2.87E-09	ND	2.37E-09	ND
INORGANICS									
Cadmium	µg/L	4.0	0.51 Ja*	0.13 Ja*	0.13 *	0.10 Ja*	0.10 *	0.29 Ja*	0.29 *
Copper	µg/L	14	20 *	5.5 *	5.6 *	5.2 *	5.2 *	3.4 *	4.1 *
Lead	µg/L	5.2	3.0 *	0.24 Ja*	<0.017 *	1.9 *	1.5 *	0.22 Ja*	<0.017 *
Mercury	µg/L	0.13	<0.10 *	<0.10 *	<0.0023 *	<0.10 *	<0.0023 *	<0.10 *	<0.0023 *
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	24 *	<1.0 *	<5.00 *	10 *	<5.00 *	<1.0 *	<5.00 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.207 *	NR *	--	NR *	--	0.046 *	--
pH (Field)	pH Units	6.5 - 8.5	5.92 *	NR *	--	NR *	--	7.12 *	--
Temperature	°C	30	14.6 *	NR *	--	NR *	--	12.5 *	--
Turbidity (Field)	NTU	-	47.3 *	NR *	--	NR *	--	95 *	--
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.046	0.02	0.02	0.019	0.019	0.031	0.031
Intensity (Ave) - Rain Event	in/hr	-	0.049	0.054	0.054	0.054	0.054	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	0.18	0.06	0.06	0.06	0.06	0.22	0.22
Intensity (Max) - Rain Event	in/hr	-	0.18	0.37	0.37	0.37	0.37	0.22	0.22
Total - Pre-Sampling	in	-	0.79	0.64	0.64	0.61	0.61	0.57	0.57
Total - Rain Event	in	-	0.93	7.22	7.22	7.22	7.22	0.57	0.57

Notes:

- 1 - Bottle for dioxins analysis broke during shipment.
2 - Dioxins not analyzed due to laboratory error.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5b
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A1SW0004	A1SW0004	A1SW0005	A1SW0005	A1SW0004	A1SW0004	A1SW0004
		Sample Name:	A1SW0004S012	A1SW0004S012-RWQCB	A1SW0005S007	A1SW0005S007-RWQCB	A1SW0004S013	A1SW0004S013-RWQCB	A1SW0004S014
		Sample Date:	12/29/2010	12/29/2010	12/29/2010	12/29/2010	1/3/2011	1/3/2011	2/19/2011
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	UG (CM-9, A1LF)	UG (CM-9, A1LF)	DG (CM-9, A1LF)	DG (CM-9, A1LF)	UG (CM-9, A1LF)	UG (CM-9, A1LF)	UG (CM-9, A1LF)
		Rain Event:	December 29, 2010	December 29, 2010	December 29, 2010	December 29, 2010	January 2-3, 2011	January 2-3, 2011	February 16-20, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	3.70E-10	ND	1.40E-10	Note 1	2.95E-09	ND	Note 2
INORGANICS									
Cadmium	µg/L	4.0	0.35 Ja*	0.28 *	0.12 Ja*	0.11 *	0.25 Ja*	0.22 *	0.26 J*
Copper	µg/L	14	4.4 *	3.8 *	3.7 *	3.3 *	3.8 *	3.4 *	4.4 *
Lead	µg/L	5.2	1.6 *	0.30 *	1.1 *	1.0 *	0.29 Ja*	<0.017 *	1.3 *
Mercury	µg/L	0.13	<0.10 *	< 0.100 *	<0.10 *	< 0.100 *	<0.10 *	< 0.100 *	<0.10 *
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	13 *	18.0 *	5.0 Ja*	<5.00 *	15 *	14.0 *	8.0 J*
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.417 *	--	0.268 *	--	0.558 *	--	0.275 *
pH (Field)	pH Units	6.5 - 8.5	7.59 *	--	7.09 *	--	7.25 *	--	6.96 *
Temperature	°C	30	10.3 *	--	9.5 *	--	12.1 *	--	11.62 *
Turbidity (Field)	NTU	-	5 *	--	81 *	--	3 *	--	> limit *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.047	0.047	0.05	0.073	0.014	0.014	0.019
Intensity (Ave) - Rain Event	in/hr	-	0.043	0.043	0.043	0.043	0.014	0.014	0.019
Intensity (Max) - Pre-Sampling	in/hr	-	0.1	0.1	0.1	0.1	0.12	0.12	0.45
Intensity (Max) - Rain Event	in/hr	-	0.1	0.1	0.1	0.1	0.12	0.12	0.45
Total - Pre-Sampling	in	-	0.43	0.43	0.43	0.41	0.38	0.38	2.04
Total - Rain Event	in	-	0.43	0.43	0.43	0.43	0.38	0.38	2.33

Notes:

- 1 - Bottle for dioxins analysis broke during shipment.
2 - Dioxins not analyzed due to laboratory error.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5b
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A1SW0004	A1SW0005	A1SW0005	A1SW0004	A1SW0004	A1SW0005	A1SW0005
		Sample Name:	A1SW0004S014-RWQCB	A1SW0005S008	A1SW0005S008-RWQCB	A1SW0004S015	A1SW0004S015-RWQCB	A1SW0005S009	A1SW0005S009-RWQCB
		Sample Date:	2/19/2011	2/19/2011	2/19/2011	2/26/2011	2/26/2011	2/26/2011	2/26/2011
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	UG (CM-9, A1LF)	DG (CM-9, A1LF)	DG (CM-9, A1LF)	UG (CM-9, A1LF)	UG (CM-9, A1LF)	DG (CM-9, A1LF)	DG (CM-9, A1LF)
		Rain Event:	February 16-20, 2011	February 16-20, 2011	February 16-20, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT						
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	Note 2	1.50E-10	ND. *	ND	ND	ND	ND
INORGANICS									
Cadmium	µg/L	4.0	0.31 *	<0.10 *	0.12 *	0.23 Ja*	0.23 *	0.16 Ja*	0.16 *
Copper	µg/L	14	4.4 *	3.7 *	3.7 *	4.4 B*	4.1 *	4.3 B*	3.9 *
Lead	µg/L	5.2	1.2 *	0.71 J*	0.72 *	0.20 Ja*	<0.017 *	0.33 Ja*	0.27 *
Mercury	µg/L	0.13	<0.100 *	<0.10 *	<0.100 *	<0.10 *	<0.100 *	<0.10 *	<0.100 *
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	50.0 *	15 *	17.0 *	<1.0 *	<5.00 *	<1.0 *	<5.00 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	--	0.21 *	--	0.295 *	--	0.264 *	--
pH (Field)	pH Units	6.5 - 8.5	--	6.45 *	--	6.53 *	--	7.19 *	--
Temperature	°C	30	--	9.04 *	--	13.99 *	--	12 *	--
Turbidity (Field)	NTU	-	--	NR *	--	0.23 *	--	NR *	--
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.019	0.019	0.019	0.055	0.055	0.049	0.049
Intensity (Ave) - Rain Event	in/hr	-	0.019	0.019	0.019	0.048	0.048	0.048	0.048
Intensity (Max) - Pre-Sampling	in/hr	-	0.45	0.45	0.45	0.26	0.26	0.26	0.26
Intensity (Max) - Rain Event	in/hr	-	0.45	0.45	0.45	0.26	0.26	0.26	0.26
Total - Pre-Sampling	in	-	2.04	2.03	2.03	1.5	1.5	1.5	1.5
Total - Rain Event	in	-	2.33	2.33	2.33	1.5	1.5	1.5	1.5

Notes:

- 1 - Bottle for dioxins analysis broke during shipment.
2 - Dioxins not analyzed due to laboratory error.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5b
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
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		Object Name:	A1SW0004	A1SW0004	A1SW0005	A1SW0005
		Sample Name:	A1SW0004S016	A1SW0004S016-RWQCB	A1SW0005S010	A1SW0005S010-RWQCB
		Sample Date:	3/21/2011	3/21/2011	3/21/2011	3/21/2011
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	UG (CM-9, A1LF)	UG (CM-9, A1LF)	DG (CM-9, A1LF)	DG (CM-9, A1LF)
		Rain Event:	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT
DIOXINS						
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND	ND	ND
INORGANICS						
Cadmium	µg/L	4.0	0.29 J	0.26	0.14 J	0.13
Copper	µg/L	14	3.8	4.0	3.6	3.7
Lead	µg/L	5.2	0.63 J	0.49	0.48 J	0.39
Mercury	µg/L	0.13	<0.10 U	<0.100 U	<0.10 U	<0.100 U
MISCELLANEOUS						
Total Suspended Solids	mg/L	-	5.0 J	13.0 *	4.0 J	<5.00 *
Turbidity	NTU	-	7.1 J	--	10 J	--
FIELD MEASUREMENTS						
Conductivity (Field)	mS	-	24 *	--	22 *	--
pH (Field)	pH Units	6.5 - 8.5	7.2 *	--	6.5 *	--
Temperature	°C	30	13.7 *	--	12 *	--
Turbidity (Field)	NTU	-	7 *	--	10 *	--
RAINFALL MEASUREMENTS †						
Intensity (Ave) - Pre-Sampling	in/hr	-	0.076	0.076	0.077	0.077
Intensity (Ave) - Rain Event	in/hr	-	0.03	0.03	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	4.81	4.81	4.81	4.81
Total - Rain Event	in	-	6.00	6.00	6.00	6.00

Notes:

- 1 - Bottle for dioxins analysis broke during shipment.
2 - Dioxins not analyzed due to laboratory error.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5c
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A1SW0002	A1SW0002	A1SW0003	A1SW0003	A1SW0002	A1SW0002	A1SW0003
		Sample Name:	A1SW0002S006	A1SW0002S006-RWQCB	A1SW0003S005	A1SW0003S005-RWQCB	A1SW0002S007	A1SW0002S007-RWQCB	A1SW0003S006
		Sample Date:	12/19/2010	12/19/2010	12/19/2010	12/19/2010	12/26/2010	12/26/2010	12/26/2010
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	UG (CM-8)	UG (CM-8)	DG (CM-8)	DG (CM-8)	UG (CM-8)	UG (CM-8)	DG (CM-8)
		Rain Event:	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 25-26, 2010	December 25-26, 2010	December 25-26, 2010
ANALYTE	UNITS	NPDES Permit Limit	RESULT						
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	--	--	--	--	--	--	--
INORGANICS									
Cadmium	µg/L	4.0	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--
Lead	µg/L	5.2	9.4 *	5.8 *	7.0 *	4.9 *	0.28 Ja*	0.20 *	0.28 Ja*
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISCELANEOUS									
Total Suspended Solids	mg/L	-	36 *	94.0 *	33 *	19.0 *	3.0 Ja*	<5.00 *	1.0 Ja*
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.078 *	--	0.048 *	--	0.074 *	--	0.069 *
pH (Field)	pH Units	6.5 - 8.5	7.24 *	--	7.37 *	--	6.71 *	--	6.74 *
Temperature	°C	30	14.1 *	--	14.1 *	--	11.1 *	--	11 *
Turbidity (Field)	NTU	-	103 *	--	23 *	--	0 *	--	0 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.055	0.055	0.055	0.055	0.032	0.032	0.033
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.054	0.054	0.054	0.03	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	0.28	0.28	0.28	0.28	0.22	0.22	0.22
Intensity (Max) - Rain Event	in/hr	-	0.37	0.37	0.37	0.37	0.22	0.22	0.22
Total - Pre-Sampling	in	-	3.28	3.28	3.24	3.24	0.57	0.57	0.57
Total - Rain Event	in	-	7.22	7.22	7.22	7.22	0.57	0.57	0.57

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5c
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
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		Object Name:	A1SW0003	A1SW0002	A1SW0002	A1SW0003	A1SW0003	A1SW0002	A1SW0002
		Sample Name:	A1SW0003S006-RWQCB	A1SW0002S008	A1SW0002S008-RWQCB	A1SW0003S007	A1SW0003S007-RWQCB	A1SW0002S009	A1SW0002S009-RWQCB
		Sample Date:	12/26/2010	12/29/2010	12/29/2010	12/29/2010	12/29/2010	1/3/2011	1/3/2011
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	DG (CM-8)	UG (CM-8)	UG (CM-8)	DG (CM-8)	DG (CM-8)	UG (CM-8)	UG (CM-8)
		Rain Event:	December 25-26, 2010	December 29, 2010	December 29, 2010	December 29, 2010	December 29, 2010	January 2-3, 2011	January 2-3, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	--	--	--	--	--	--	--
INORGANICS									
Cadmium	µg/L	4.0	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--
Lead	µg/L	5.2	<0.017 *	0.22 Ja*	<0.017 *	0.21 Ja*	0.20 *	<0.20 *	1.2 *
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	<5.00 *	<1.0 *	<5.00 *	1.0 Ja*	<5.00 *	1.0 Ja*	< 5.00 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	--	0.074 *	--	0.074 *	--	0.082 *	--
pH (Field)	pH Units	6.5 - 8.5	--	6.63 *	--	7.10 *	--	7.20 *	--
Temperature	°C	30	--	9.9 *	--	9.9 *	--	10.3 *	--
Turbidity (Field)	NTU	-	--	100 *	--	91 *	--	0 *	--
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.033	0.054	0.054	0.056	0.056	0.014	0.014
Intensity (Ave) - Rain Event	in/hr	-	0.03	0.043	0.043	0.043	0.043	0.014	0.014
Intensity (Max) - Pre-Sampling	in/hr	-	0.22	0.1	0.1	0.1	0.1	0.12	0.12
Intensity (Max) - Rain Event	in/hr	-	0.22	0.1	0.1	0.1	0.1	0.12	0.12
Total - Pre-Sampling	in	-	0.57	0.43	0.43	0.43	0.43	0.38	0.38
Total - Rain Event	in	-	0.57	0.43	0.43	0.43	0.43	0.38	0.38

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5c
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A1SW0003	A1SW0003	A1SW0002	A1SW0002	A1SW0003	A1SW0003	A1SW0002
		Sample Name:	A1SW0003S008	A1SW0003S008-RWQCB	A1SW0002S010	A1SW0002S0010-RWQCB	A1SW0003S009	A1SW0003S009-RWQCB	A1SW0002S011
		Sample Date:	1/3/2011	1/3/2011	2/26/2011	2/26/2011	2/26/2011	2/26/2011	3/21/2011
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	DG (CM-8)	DG (CM-8)	UG (CM-8)	UG (CM-8)	DG (CM-8)	DG (CM-8)	UG (CM-8)
		Rain Event:	January 2-3, 2011	January 2-3, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	--	--	--	--	--	--	--
INORGANICS									
Cadmium	µg/L	4.0	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--
Lead	µg/L	5.2	<0.20 *	<0.017 *	0.42 Ja*	0.36 *	0.21 Ja*	0.20 *	0.40 J
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISCELANEOUS									
Total Suspended Solids	mg/L	-	1.0 Ja*	< 5.00 *	3.0 Ja*	< 5.00 *	<1.0 *	<5.00 *	3.0 J
Turbidity	NTU	-	--	--	--	--	--	--	2.8 J
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.079 *	--	0.061 *	--	0.059 *	--	6 *
pH (Field)	pH Units	6.5 - 8.5	7.18 *	--	7.41 *	--	7.34 *	--	6.7 *
Temperature	°C	30	10.5 *	--	10.1 *	--	10.2 *	--	11.8 *
Turbidity (Field)	NTU	-	108 *	--	10 *	--	10 *	--	1 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.014	0.014	0.05	0.05	0.05	0.05	0.077
Intensity (Ave) - Rain Event	in/hr	-	0.014	0.014	0.048	0.048	0.048	0.048	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	0.12	0.12	0.26	0.26	0.26	0.26	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	0.12	0.12	0.26	0.26	0.26	0.26	Not Available (>0.4)
Total - Pre-Sampling	in	-	0.38	0.38	1.5	1.5	1.5	1.5	4.81
Total - Rain Event	in	-	0.38	0.38	1.5	1.5	1.5	1.5	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5c
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A1SW0002	A1SW0003	A1SW0003
		Sample Name:	A1SW0002S011-RWQCB	A1SW0003S010	A1SW0003S010-RWQCB
		Sample Date:	3/21/2011	3/21/2011	3/21/2011
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	UG (CM-8)	DG (CM-8)	DG (CM-8)
		Rain Event:	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT
DIOXINS					
TCDD TEQ_NoDNQ	µg/L	2.80E-08	--	--	--
INORGANICS					
Cadmium	µg/L	4.0	--	--	--
Copper	µg/L	14	--	--	--
Lead	µg/L	5.2	0.25	0.29 J	0.25
Mercury	µg/L	0.13	--	--	--
MISCELLANEOUS					
Total Suspended Solids	mg/L	-	3.0 J	<1.0 U	<5.00 *
Turbidity	NTU	-	<5.00 *	2.0 J	--
FIELD MEASUREMENTS					
Conductivity (Field)	mS	-	6 *	7 *	--
pH (Field)	pH Units	6.5 - 8.5	6.7 *	6.8 *	--
Temperature	°C	30	11.8 *	11.8 *	--
Turbidity (Field)	NTU	-	1 *	1 *	--
RAINFALL MEASUREMENTS †					
Intensity (Ave) - Pre-Sampling	in/hr	-	0.077	0.078	0.078
Intensity (Ave) - Rain Event	in/hr	-	0.03	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	4.81	4.81	4.81
Total - Rain Event	in	-	6.00	6.00	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5d
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A1SW0006	A1SW0006	A1SW0007	A1SW0007	A1SW0006	A1SW0006	A1SW0007
		Sample Name:	A1SW0006S006	A1SW0006S006-RWQCB	A1SW0007S005	A1SW0007S005-RWQCB	A1SW0006S007	A1SW0006S007-RWQCB	A1SW0007S006
		Sample Date:	12/19/2010	12/19/2010	12/19/2010	12/19/2010	12/26/2010	12/26/2010	12/26/2010
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	UG (CM-11)	UG (CM-11)	DG (CM-11)	DG (CM-11)	UG (CM-11)	UG (CM-11)	DG (CM-11)
		Rain Event:	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 25-26, 2010	December 25-26, 2010	December 25-26, 2010
ANALYTE	UNITS	NPDES Permit Limit	RESULT						
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	1.40E-10	2.10E-10	ND	1.20E-10	9.92E-10	ND	9.14E-10
INORGANICS									
Cadmium	µg/L	4.0	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--
Lead	µg/L	5.2	--	--	--	--	--	--	--
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	8.0 Ja*	23.0 *	1.0 Ja*	<5.00 *	<1.0 *	<5.00 *	<1.0 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.121 *	--	0.113 *	--	0.094 *	--	0.093 *
pH (Field)	pH Units	6.5 - 8.5	7.12 *	--	6.98 *	--	6.75 *	--	6.82 *
Temperature	°C	30	14.4 *	--	13.7 *	--	10.8 *	--	10.7 *
Turbidity (Field)	NTU	-	109 *	--	108 *	--	111 *	--	112 *
RAINFALL MEASUREMENTS[†]									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.053	0.053	0.051	0.051	0.033	0.033	0.034
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.054	0.054	0.054	0.03	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	0.28	0.28	0.24	0.24	0.22	0.22	0.22
Intensity (Max) - Rain Event	in/hr	-	0.37	0.37	0.37	0.37	0.22	0.22	0.22
Total - Pre-Sampling	in	-	3.08	3.08	2.95	2.95	0.57	0.57	0.57
Total - Rain Event	in	-	7.22	7.22	7.22	7.22	0.57	0.57	0.57

Notes:

1 - Bottle for dioxins analysis broke during shipment.

[†] Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5d
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A1SW0007	A1SW0006	A1SW0006	A1SW0007	A1SW0007	A1SW0006	A1SW0006
		Sample Name:	A1SW0007S006-RWQCB	A1SW0006S008	A1SW0006S008-RWQCB	A1SW0007S007	A1SW0007S007-RWQCB	A1SW0006S009	A1SW0006S009-RWQCB
		Sample Date:	12/26/2010	12/29/2010	12/29/2010	12/29/2010	12/29/2010	1/3/2011	1/3/2011
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	DG (CM-11)	UG (CM-11)	UG (CM-11)	DG (CM-11)	DG (CM-11)	UG (CM-11)	UG (CM-11)
		Rain Event:	December 25-26, 2010	December 29, 2010	December 29, 2010	December 29, 2010	December 29, 2010	January 2-3, 2011	January 2-3, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND	ND	4.48E-09	Note 1	8.50E-10	ND
INORGANICS									
Cadmium	µg/L	4.0	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--
Lead	µg/L	5.2	--	--	--	--	--	--	--
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISCELANEOUS									
Total Suspended Solids	mg/L	-	<5.00 *	<1.0 *	<5.00 *	<1.0 *	<5.00 *	4.0 Ja*	< 5.00 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	--	0.101 *	--	0.104 *	--	0.11 *	--
pH (Field)	pH Units	6.5 - 8.5	--	6.97 *	--	7.00 *	--	7.08 *	--
Temperature	°C	30	--	9.8 *	--	9.3 *	--	10.1 *	--
Turbidity (Field)	NTU	-	--	102 *	--	84 *	--	0 *	--
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.034	0.058	0.058	0.06	0.06	0.014	0.014
Intensity (Ave) - Rain Event	in/hr	-	0.03	0.043	0.043	0.043	0.043	0.014	0.014
Intensity (Max) - Pre-Sampling	in/hr	-	0.22	0.1	0.1	0.1	0.1	0.12	0.12
Intensity (Max) - Rain Event	in/hr	-	0.22	0.1	0.1	0.1	0.1	0.12	0.12
Total - Pre-Sampling	in	-	0.57	0.43	0.43	0.43	0.43	0.38	0.38
Total - Rain Event	in	-	0.57	0.43	0.43	0.43	0.43	0.38	0.38

Notes:

1 - Bottle for dioxins analysis broke during shipment.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5d
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A1SW0007	A1SW0007	A1SW0007	A1SW0007	A1SW0006	A1SW0006	A1SW0007
		Sample Name:	A1SW0007S008	A1SW0007S008-RWQCB	A1SW0007S009	A1SW0007S009-RWQCB	A1SW0006S010	A1SW0006S010-RWQCB	A1SW0007S010
		Sample Date:	1/3/2011	1/3/2011	2/19/2011	2/19/2011	2/26/2011	2/26/2011	2/26/2011
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	DG (CM-11)	DG (CM-11)	DG (CM-11)	DG (CM-11)	UG (CM-11)	UG (CM-11)	DG (CM-11)
		Rain Event:	January 2-3, 2011	January 2-3, 2011	February 16-20, 2011	February 16-20, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	8.68E-10	ND	ND	ND	ND	ND	ND
INORGANICS									
Cadmium	µg/L	4.0	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--
Lead	µg/L	5.2	--	--	--	--	--	--	--
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	<1.0 *	< 5.00 *	9.0 J*	<5.00 *	2.0 Ja*	<5.00 *	8.0 Ja*
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.111 *	--	0.093 *	--	0.074 *	--	0.077 *
pH (Field)	pH Units	6.5 - 8.5	7.18 *	--	7.23 *	--	6.57 *	--	6.71 *
Temperature	°C	30	11.3 *	--	9.6 *	--	13.14 *	--	13.35 *
Turbidity (Field)	NTU	-	0 *	--	31 *	--	0.46 *	--	3.49 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.015	0.015	0.019	0.019	0.053	0.053	0.052
Intensity (Ave) - Rain Event	in/hr	-	0.014	0.014	0.019	0.019	0.048	0.048	0.048
Intensity (Max) - Pre-Sampling	in/hr	-	0.12	0.12	0.45	0.45	0.26	0.26	0.26
Intensity (Max) - Rain Event	in/hr	-	0.12	0.12	0.45	0.45	0.26	0.26	0.26
Total - Pre-Sampling	in	-	0.38	0.38	2.03	2.03	1.5	1.5	1.5
Total - Rain Event	in	-	0.38	0.38	2.33	2.33	1.5	1.5	1.5

Notes:

1 - Bottle for dioxins analysis broke during shipment.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5d
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
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		Object Name:	A1SW0007	A1SW0006	A1SW0006	A1SW0007	A1SW0007	A1SW0006	A1SW0006	A1SW0007
		Sample Name:	A1SW0007S010-RWQCB	A1SW0006S011	A1SW0006S011-RWQCB	A1SW0007S011	A1SW0007S011-RWQCB	A1SW0006S012	A1SW0006S012-RWQCB	A1SW0007S012
		Sample Date:	2/26/2011	3/7/2011	3/7/2011	3/7/2011	3/7/2011	3/21/2011	3/21/2011	3/21/2011
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	DG (CM-11)	UG (CM-11)	UG (CM-11)	DG (CM-11)	DG (CM-11)	UG (CM-11)	UG (CM-11)	DG (CM-11)
		Rain Event:	February 25-26, 2011	March 6-7, 2011	March 6-7, 2011	March 6-7, 2011	March 6-7, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS										
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND	ND	ND	ND	ND	ND	ND
INORGANICS										
Cadmium	µg/L	4.0	--	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--	--
Lead	µg/L	5.2	--	--	--	--	--	--	--	--
Mercury	µg/L	0.13	--	--	--	--	--	--	--	--
MISCELANEOUS										
Total Suspended Solids	mg/L	-	<5.00 *	3.0 Ja*	< 5.00 *	3.0 Ja*	117 *	3.0 J	<5.00 *	2.0 J
Turbidity	NTU	-	--	--	--	--	--	9.6 J	--	5.1 J
FIELD MEASUREMENTS										
Conductivity (Field)	mS	-	--	15.7 *	--	14.6 *	--	8 *	--	10 *
pH (Field)	pH Units	6.5 - 8.5	--	7.65 *	--	6.63 *	--	6 *	--	6 *
Temperature	°C	30	--	17.7 *	--	15.4 *	--	12.3 *	--	11.9 *
Turbidity (Field)	NTU	-	--	0.9 *	--	25.2 *	--	2 *	--	4 *
RAINFALL MEASUREMENTS †										
Intensity (Ave) - Pre-Sampling	in/hr	-	0.052	0.007	0.007	0.006	0.006	0.079	0.079	0.08
Intensity (Ave) - Rain Event	in/hr	-	0.048	0.006	0.006	0.006	0.006	0.03	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	0.26	0.02	0.02	0.02	0.02	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	0.26	0.02	0.02	0.02	0.02	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	1.5	0.12	0.12	0.12	0.12	4.81	4.81	4.81
Total - Rain Event	in	-	1.5	0.12	0.12	0.12	0.12	6.00	6.00	6.00

Notes:

1 - Bottle for dioxins analysis broke during shipment.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5d
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A1SW0007
		Sample Name:	A1SW0007S012-RWQCB
		Sample Date:	3/21/2011
		Sample Type:	Perf Mon Split
		Location:	DG (CM-11)
		Rain Event:	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT
DIOXINS			
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND
INORGANICS			
Cadmium	µg/L	4.0	--
Copper	µg/L	14	--
Lead	µg/L	5.2	--
Mercury	µg/L	0.13	--
MISCELLANEOUS			
Total Suspended Solids	mg/L	-	<5.00 *
Turbidity	NTU	-	--
FIELD MEASUREMENTS			
Conductivity (Field)	mS	-	--
pH (Field)	pH Units	6.5 - 8.5	--
Temperature	°C	30	--
Turbidity (Field)	NTU	-	--
RAINFALL MEASUREMENTS †			
Intensity (Ave) - Pre-Sampling	in/hr	-	0.08
Intensity (Ave) - Rain Event	in/hr	-	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)
Total - Pre-Sampling	in	-	4.81
Total - Rain Event	in	-	6.00

Notes:

1 - Bottle for dioxins analysis broke during shipment.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5e
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	LFSW0002	LFSW0002
		Sample Name:	LFSW0002S001	LFSW0002S001-RWQCB
		Sample Date:	3/25/2011	3/25/2011
		Sample Type:	Perf Mon	Perf Mon Split
		Location:	DG CTLI	DG CTLI
		Rain Event:	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT
DIOXINS				
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND
INORGANICS				
Cadmium	µg/L	4.0	--	--
Copper	µg/L	14	4.0 *	2.6 *
Lead	µg/L	5.2	3.2 *	2.4 *
Mercury	µg/L	0.13	--	--
MISCELLANEOUS				
Total Suspended Solids	mg/L	-	66 *	71.0 *
Turbidity	NTU	-	48 H*	--
FIELD MEASUREMENTS				
Conductivity (Field)	mS	-	0.122 *	--
pH (Field)	pH Units	6.5 - 8.5	7.25 *	--
Temperature	°C	30	16.7 *	--
Turbidity (Field)	NTU	-	NR *	--
RAINFALL MEASUREMENTS †				
Intensity (Ave) - Pre-Sampling	in/hr	-	0.038	0.038
Intensity (Ave) - Rain Event	in/hr	-	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	5.92	5.92
Total - Rain Event	in	-	6.00	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5f
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	LXSW0001	LXSW0001	LXSW0002	LXSW0002	LXSW0001	LXSW0001	LXSW0002
		Sample Name:	LXSW0001S003	LXSW0001S003-RWQCB	LXSW0002S004	LXSW0002S004-RWQCB	LXSW0001S004	LXSW0001S004-RWQCB	LXSW0002S005
		Sample Date:	12/20/2010	12/20/2010	12/20/2010	12/20/2010	12/26/2010	12/26/2010	12/26/2010
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	UG (CM-3)	UG (CM-3)	DG (CM-3)	DG (CM-3)	UG (CM-3)	UG (CM-3)	DG (CM-3)
		Rain Event:	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 25-26, 2010	December 25-26, 2010	December 25-26, 2010
ANALYTE	UNITS	NPDES Permit Limit	RESULT						
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	1.06E-09	ND	1.21E-09	ND	1.10E-11	ND	3.57E-09
INORGANICS									
Cadmium	µg/L	4.0	<0.10 *	<0.013 *	<0.10 *	<0.013 *	<0.10 *	<0.013 *	<0.10 *
Copper	µg/L	14	1.5 Ja*	1.7 *	2.4 *	2.4 *	1.1 Ja*	1.5 *	1.8 Ja*
Lead	µg/L	5.2	0.46 Ja*	0.32 *	0.52 Ja*	0.43 *	0.30 Ja*	0.32 *	0.25 Ja*
Mercury	µg/L	0.13	<0.10 *	<0.0023 *	<0.10 *	<0.0023 *	<0.10 *	<0.0023 *	<0.10 *
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	3.0 Ja*	<5.00 *	4.0 Ja*	<5.00 *	6.0 Ja*	<5.00 *	4.0 Ja*
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	NR *	--	NR *	--	0.1 *	--	0.107 *
pH (Field)	pH Units	6.5 - 8.5	NR *	--	NR *	--	7.14 *	--	7.02 *
Temperature	°C	30	NR *	--	NR *	--	9.7 *	--	10.4 *
Turbidity (Field)	NTU	-	NR *	--	NR *	--	85 *	--	0 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.058	0.058	0.058	0.058	0.033	0.033	0.035
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.054	0.054	0.054	0.03	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	0.37	0.37	0.37	0.37	0.22	0.22	0.22
Intensity (Max) - Rain Event	in/hr	-	0.37	0.37	0.37	0.37	0.22	0.22	0.22
Total - Pre-Sampling	in	-	4.79	4.79	4.81	4.81	0.57	0.57	0.57
Total - Rain Event	in	-	7.22	7.22	7.22	7.22	0.57	0.57	0.57

Notes:

- 1 - Bottle for dioxins analysis broke during shipment.
2 - Dioxins not analyzed due to laboratory error.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5f
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
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		Object Name:	LXSW0002	LXSW0001	LXSW0001	LXSW0002	LXSW0002	LXSW0001	LXSW0001
		Sample Name:	LXSW0002S005-RWQCB	LXSW0001S005	LXSW0001S005-RWQCB	LXSW0002S006	LXSW0002S006-RWQCB	LXSW0001S006	LXSW0001S006-RWQCB
		Sample Date:	12/26/2010	12/29/2010	12/29/2010	12/29/2010	12/29/2010	1/3/2011	1/3/2011
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	DG (CM-3)	UG (CM-3)	UG (CM-3)	DG (CM-3)	DG (CM-3)	UG (CM-3)	UG (CM-3)
		Rain Event:	December 25-26, 2010	December 29, 2010	December 29, 2010	December 29, 2010	December 29, 2010	January 2-3, 2011	January 2-3, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	Note 2	ND	ND	ND	Note 1	1.58E-09	ND
INORGANICS									
Cadmium	µg/L	4.0	<0.013 *	<0.10 *	<0.013 *	<0.10 *	<0.013 *	<0.10 *	<0.013 *
Copper	µg/L	14	2.3 *	1.4 Ja*	1.2 *	1.6 Ja*	1.5 *	2.2 *	1.1 *
Lead	µg/L	5.2	<0.017 *	1.6 *	1.1 *	0.28 Ja*	0.24 *	1.1 *	0.33 *
Mercury	µg/L	0.13	<0.0023 *	<0.10 *	< 0.100 *	<0.10 *	< 0.100 *	<0.10 *	< 0.100 *
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	<5.00 *	32 *	187 *	<1.0 *	<5.00 *	7.0 Ja*	16.0 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	--	0.101 *	--	0.12 *	--	0.101 *	--
pH (Field)	pH Units	6.5 - 8.5	--	7.16 *	--	7.08 *	--	7.37 *	--
Temperature	°C	30	--	9.6 *	--	10 *	--	9.9 *	--
Turbidity (Field)	NTU	-	--	69 *	--	2 *	--	94 *	--
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.035	0.062	0.062	0.065	0.065	0.015	0.015
Intensity (Ave) - Rain Event	in/hr	-	0.03	0.043	0.043	0.043	0.043	0.014	0.014
Intensity (Max) - Pre-Sampling	in/hr	-	0.22	0.1	0.1	0.1	0.1	0.12	0.12
Intensity (Max) - Rain Event	in/hr	-	0.22	0.1	0.1	0.1	0.1	0.12	0.12
Total - Pre-Sampling	in	-	0.57	0.43	0.43	0.43	0.43	0.38	0.38
Total - Rain Event	in	-	0.57	0.43	0.43	0.43	0.43	0.38	0.38

Notes:

- 1 - Bottle for dioxins analysis broke during shipment.
2 - Dioxins not analyzed due to laboratory error.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

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ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	LXSW0002	LXSW0002	LXSW0001	LXSW0001	LXSW0002	LXSW0002	LXSW0003
		Sample Name:	LXSW0002S007	LXSW0002S007-RWQCB	LXSW0001S007	LXSW0001S007-RWQCB	LXSW0002S008	LXSW0002S008-RWQCB	LXSW0003S001
		Sample Date:	1/3/2011	1/3/2011	2/26/2011	2/26/2011	2/26/2011	2/26/2011	3/21/2011
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	DG (CM-3)	DG (CM-3)	UG (CM-3)	UG (CM-3)	DG (CM-3)	DG (CM-3)	UG (CM-3)
		Rain Event:	January 2-3, 2011	January 2-3, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	2.33E-10	ND	ND	ND	ND	ND	ND
INORGANICS									
Cadmium	µg/L	4.0	<0.10 *	<0.013 *	<0.10 *	<0.013 *	<0.10 *	<0.013 *	<0.10 U
Copper	µg/L	14	2.5 *	2.4 *	1.5 B, Ja*	1.3 *	13 B*	2.0 *	1.6 J
Lead	µg/L	5.2	0.24 Ja*	<0.017 *	0.24 Ja*	0.23 *	0.34 Ja*	0.32 *	1.4 J
Mercury	µg/L	0.13	<0.10 *	< 0.100 *	<0.10 *	<0.100 *	<0.10 *	<0.100 *	<0.10 U
MISCELANEOUS									
Total Suspended Solids	mg/L	-	<1.0 *	< 5.00 *	3.0 Ja*	<5.00 *	3.0 Ja*	<5.00 *	22
Turbidity	NTU	-	--	--	--	--	--	--	19 J
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.131 *	--	0.09 *	--	0.107 *	--	9 *
pH (Field)	pH Units	6.5 - 8.5	7.25 *	--	6.65 *	--	6.61 *	--	6.2 *
Temperature	°C	30	9.9 *	--	9.96 *	--	10.65 *	--	10.4 *
Turbidity (Field)	NTU	-	348 *	--	1.96 *	--	3.61 *	--	24 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.015	0.015	0.057	0.057	0.058	0.058	0.08
Intensity (Ave) - Rain Event	in/hr	-	0.014	0.014	0.048	0.048	0.048	0.048	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	0.12	0.12	0.26	0.26	0.26	0.26	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	0.12	0.12	0.26	0.26	0.26	0.26	Not Available (>0.4)
Total - Pre-Sampling	in	-	0.38	0.38	1.5	1.5	1.5	1.5	4.81
Total - Rain Event	in	-	0.38	0.38	1.5	1.5	1.5	1.5	6.00

Notes:

- 1 - Bottle for dioxins analysis broke during shipment.
2 - Dioxins not analyzed due to laboratory error.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5f
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	LXSW0003	LXSW0002	LXSW0002
		Sample Name:	LXSW0003S001-RWQCB	LXSW0002S009	LXSW0002S009-RWQCB
		Sample Date:	3/21/2011	3/21/2011	3/21/2011
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	UG (CM-3)	DG (CM-3)	DG (CM-3)
		Rain Event:	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT
DIOXINS					
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND	ND
INORGANICS					
Cadmium	µg/L	4.0	<0.013 U	<0.10 U	<0.013 U
Copper	µg/L	14	1.3	1.8 J	1.4
Lead	µg/L	5.2	0.76	1.2 J	0.74
Mercury	µg/L	0.13	< 0.100 U	<0.10 U	< 0.100 U
MISCELLANEOUS					
Total Suspended Solids	mg/L	-	29.0 *	14	18.0 *
Turbidity	NTU	-	--	20 J	--
FIELD MEASUREMENTS					
Conductivity (Field)	mS	-	--	12 *	--
pH (Field)	pH Units	6.5 - 8.5	--	6.2 *	--
Temperature	°C	30	--	9.9 *	--
Turbidity (Field)	NTU	-	--	26 *	--
RAINFALL MEASUREMENTS †					
Intensity (Ave) - Pre-Sampling	in/hr	-	0.08	0.08	0.08
Intensity (Ave) - Rain Event	in/hr	-	0.03	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	4.81	4.81	4.81
Total - Rain Event	in	-	6.00	6.00	6.00

Notes:

- 1 - Bottle for dioxins analysis broke during shipment.
2 - Dioxins not analyzed due to laboratory error.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5g
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A2SW0001	A2SW0002	A2SW0001	A2SW0001	A2SW0007	A2SW0007	A2SW0002
		Sample Name:	A2SW0001S005	A2SW0002S007	A2SW0001S006	A2SW0001S006-RWQCB	A2SW0007S001	A2SW0007S001-RWQCB	A2SW0002S008
		Sample Date:	10/6/2010	10/6/2010	12/19/2010	12/19/2010	12/22/2010	12/22/2010	12/19/2010
		Sample Type:	Perf Mon	Perf Mon	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)
		Rain Event:	October 5-6, 2010	October 5-6, 2010	December 17-22, 2010				
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	1.81E-06	9.25E-06	3.39E-07	2.71E-07	4.27E-09	2.10E-10 *	1.50E-07
INORGANICS									
Cadmium	µg/L	4.0	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--
Lead	µg/L	5.2	36 *	15 *	21 *	8.8 *	0.65 J*	0.67 *	3.7 *
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISCELANEOUS									
Total Suspended Solids	mg/L	-	110 *	47 *	140 *	70.0 *	4.0 J*	< 5.00 *	14 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.77 *	0.075 *	0.55 *	--	0.171 *	--	0.6 *
pH (Field)	pH Units	6.5 - 8.5	5.35 *	4.66 *	6.84 *	--	7.46 *	--	6.29 *
Temperature	°C	30	14.81 *	16.61 *	14.6 *	--	12.3 *	--	13.8 *
Turbidity (Field)	NTU	-	180 *	85.7 *	283 *	--	7 *	--	20 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.046	0.045	0.051	0.051	0.052	0.052	0.051
Intensity (Ave) - Rain Event	in/hr	-	0.049	0.049	0.054	0.054	0.054	0.054	0.054
Intensity (Max) - Pre-Sampling	in/hr	-	0.18	0.18	0.24	0.24	0.37	0.37	0.24
Intensity (Max) - Rain Event	in/hr	-	0.18	0.18	0.37	0.37	0.37	0.37	0.37
Total - Pre-Sampling	in	-	0.76	0.76	2.9	2.9	6.64	6.64	2.86
Total - Rain Event	in	-	0.93	0.93	7.22	7.22	7.22	7.22	7.22

Notes:

1 - Bottle for dioxins analysis broke during shipment.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5g
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A2SW0002	A2SW0006	A2SW0006	A2SW0002	A2SW0002	A2SW0001	A2SW0001
		Sample Name:	A2SW0002S008-RWQCB	A2SW0006S005	A2SW0006S005-RWQCB	A2SW0002S009	A2SW0002S009-RWQCB	A2SW0001S007	A2SW0001S007-RWQCB
		Sample Date:	12/19/2010	12/26/2010	12/26/2010	12/26/2010	12/26/2010	12/29/2010	12/29/2010
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	DG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)
		Rain Event:	December 17-22, 2010	December 25-26, 2010	December 25-26, 2010	December 25-26, 2010	December 25-26, 2010	December 29, 2010	December 29, 2010
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	1.28E-07	2.33E-09	ND	2.74E-09	ND	1.44E-07	Note 1
INORGANICS									
Cadmium	µg/L	4.0	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--
Lead	µg/L	5.2	3.3 *	0.30 Ja*	<0.017 *	<0.20 *	<0.017 *	3.4 *	3.4 *
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	<5.00 *	1.0 Ja*	<5.00 *	<1.0 *	<5.00 *	5.0 Ja*	<5.00 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	--	0.167 *	--	0.179 *	--	0.046 *	--
pH (Field)	pH Units	6.5 - 8.5	--	7 *	--	7.07 *	--	6.95 *	--
Temperature	°C	30	--	9.6 *	--	8.8 *	--	9.4 *	--
Turbidity (Field)	NTU	-	--	89 *	--	0 *	--	109 *	--
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.051	0.036	0.036	0.037	0.037	0.073	0.073
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.03	0.03	0.03	0.03	0.043	0.043
Intensity (Max) - Pre-Sampling	in/hr	-	0.24	0.22	0.22	0.22	0.22	0.1	0.1
Intensity (Max) - Rain Event	in/hr	-	0.37	0.22	0.22	0.22	0.22	0.1	0.1
Total - Pre-Sampling	in	-	2.86	0.57	0.57	0.57	0.57	0.41	0.41
Total - Rain Event	in	-	7.22	0.57	0.57	0.57	0.57	0.43	0.43

Notes:

1 - Bottle for dioxins analysis broke during shipment.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5g
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A2SW0006	A2SW0006	A2SW0002	A2SW0002	A2SW0006	A2SW0006	A2SW0002
		Sample Name:	A2SW0006S006	A2SW0006S006-RWQCB	A2SW0002S010	A2SW0002S010-RWQCB	A2SW0006S007	A2SW0006S007-RWQCB	A2SW0002S011
		Sample Date:	12/29/2010	12/29/2010	12/29/2010	12/29/2010	1/3/2011	1/3/2011	1/3/2011
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon
		Location:	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)
		Rain Event:	December 29, 2010	December 29, 2010	December 29, 2010	December 29, 2010	January 2-3, 2011	January 2-3, 2011	January 2-3, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	2.59E-08	Note 1	1.04E-07	4.69E-08	6.00E-10	ND	ND
INORGANICS									
Cadmium	µg/L	4.0	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--
Lead	µg/L	5.2	<0.20 *	0.31 *	3.1 *	2.8 *	2.0 *	0.94 *	<0.20 *
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	3.0 Ja*	<5.00 *	6.0 Ja*	<5.00 *	18 *	63.0 *	<1.0 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.175 *	--	0.114 *	--	0.192 *	--	0.182 *
pH (Field)	pH Units	6.5 - 8.5	6.67 *	--	7.05 *	--	7.04 *	--	6.54 *
Temperature	°C	30	9.6 *	--	9.9 *	--	8.3 *	--	8.2 *
Turbidity (Field)	NTU	-	232 *	--	14 *	--	7 *	--	101 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.07	0.07	0.078	0.078	0.016	0.016	0.017
Intensity (Ave) - Rain Event	in/hr	-	0.043	0.043	0.043	0.043	0.014	0.014	0.014
Intensity (Max) - Pre-Sampling	in/hr	-	0.1	0.1	0.1	0.1	0.12	0.12	0.12
Intensity (Max) - Rain Event	in/hr	-	0.1	0.1	0.1	0.1	0.12	0.12	0.12
Total - Pre-Sampling	in	-	0.42	0.42	0.4	0.4	0.38	0.38	0.38
Total - Rain Event	in	-	0.43	0.43	0.43	0.43	0.38	0.38	0.38

Notes:

1 - Bottle for dioxins analysis broke during shipment.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5g
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A2SW0002	A2SW0002	A2SW0002	A2SW0007	A2SW0007	A2SW0002	A2SW0002
		Sample Name:	A2SW0002S011-RWQCB	A2SW0002S013	A2SW0002S013-RWQCB	A2SW0007S002	A2SW0007S002-RWQCB	A2SW0002S014	A2SW0002S014-RWQCB
		Sample Date:	1/3/2011	2/19/2011	2/19/2011	2/26/2011	2/26/2011	2/26/2011	2/26/2011
		Sample Type:	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	DG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)
		Rain Event:	January 2-3, 2011	February 16-20, 2011	February 16-20, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	2.99E-08 *	2.98E-08 *	ND	ND	1.30E-10	1.23E-10
INORGANICS									
Cadmium	µg/L	4.0	--	--	--	--	--	--	--
Copper	µg/L	14	--	--	--	--	--	--	--
Lead	µg/L	5.2	<0.017 *	1.3 *	1.3 *	0.80 Ja*	0.57 *	0.46 Ja*	0.41 *
Mercury	µg/L	0.13	--	--	--	--	--	--	--
MISCELLANEOUS									
Total Suspended Solids	mg/L	-	< 5.00 *	<1.0 *	<5.00 *	7.0 Ja*	<5.00 *	1.0 Ja*	<5.00 *
Turbidity	NTU	-	--	--	--	--	--	--	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	--	0.083 *	--	0.144 *	--	0.187 *	--
pH (Field)	pH Units	6.5 - 8.5	--	7.51 *	--	7.14 *	--	6.82 *	--
Temperature	°C	30	--	9.8 *	--	8.2 *	--	8.5 *	--
Turbidity (Field)	NTU	-	--	122 *	--	10 *	--	10 *	--
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.017	0.019	0.019	0.058	0.058	0.06	0.06
Intensity (Ave) - Rain Event	in/hr	-	0.014	0.019	0.019	0.048	0.048	0.048	0.048
Intensity (Max) - Pre-Sampling	in/hr	-	0.12	0.45	0.45	0.26	0.26	0.26	0.26
Intensity (Max) - Rain Event	in/hr	-	0.12	0.45	0.45	0.26	0.26	0.26	0.26
Total - Pre-Sampling	in	-	0.38	2.03	2.03	1.5	1.5	1.5	1.5
Total - Rain Event	in	-	0.38	2.33	2.33	1.5	1.5	1.5	1.5

Notes:

1 - Bottle for dioxins analysis broke during shipment.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 2-5g
ISRA Performance Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name:	A2SW0007	A2SW0007	A2SW0002	A2SW0002
		Sample Name:	A2SW0007S003	A2SW0007S003-RWQCB	A2SW0002S015	A2SW0002S015-RWQCB
		Sample Date:	3/21/2011	3/21/2011	3/21/2011	3/21/2011
		Sample Type:	Perf Mon	Perf Mon Split	Perf Mon	Perf Mon Split
		Location:	UG (CM-1, A2LF-3)	UG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)	DG (CM-1, A2LF-3)
		Rain Event:	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES Permit Limit	RESULT	RESULT	RESULT	RESULT
DIOXINS						
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND	ND	ND
INORGANICS						
Cadmium	µg/L	4.0	--	--	--	--
Copper	µg/L	14	--	--	--	--
Lead	µg/L	5.2	0.53 J	0.33	0.44 J	0.28
Mercury	µg/L	0.13	--	--	--	--
MISCELLANEOUS						
Total Suspended Solids	mg/L	-	8.0 J	<5.00 *	5.0 J	<5.00 *
Turbidity	NTU	-	7.0 J	--	5.0 J	--
FIELD MEASUREMENTS						
Conductivity (Field)	mS	-	39 *	--	36 *	--
pH (Field)	pH Units	6.5 - 8.5	6.1 *	--	5.4 *	--
Temperature	°C	30	10.3 *	--	10.7 *	--
Turbidity (Field)	NTU	-	10 *	--	7 *	--
RAINFALL MEASUREMENTS †						
Intensity (Ave) - Pre-Sampling	in/hr	-	0.082	0.082	0.083	0.083
Intensity (Ave) - Rain Event	in/hr	-	0.03	0.03	0.03	0.03
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	4.81	4.81	4.81	4.81
Total - Rain Event	in	-	6.00	6.00	6.00	6.00

Notes:

1 - Bottle for dioxins analysis broke during shipment.

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-1
BMP Monitoring Sample Collection Matrix
2010-2011 Rainy Season
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Watershed	Object ID	Sample ID	Collection Date	Collection Time	Location	Position	Sample Type	Matrix	Total Recoverable Metals	Dissolved Metals	PSD	Turbidity	Dioxins (Method 1613)	Total Suspended Solids (Method 2540)	Comments
009	LPBMP0001	LPBMP0001S001	12/18/2010	9:00	Lower Parking Lot	Soil Stockpile Area	Primary	Water	X	X	X	X	X	X	
008	HZBMP0001	HZBMP0001S001	12/22/2010	10:45	Happy Valley	Co-located with HZSW0007	Primary	Water	X	X	X	X	X	X	1
008	HZBMP0002	HZBMP0002S001	12/22/2010	9:25	Happy Valley	Co-located with HZSW0004	Primary	Water	X	X	X	X	X	X	1
008	HZBMP0003	HZBMP0003S001	12/22/2010	8:00	Happy Valley	Co-located with HZSW0003	Primary	Water	X	X	X	X	X	X	1
009	A1BMP0001	A1BMP0001S001	12/22/2010	14:30	A1LF	Tributary drainage	Primary	Water	X	X	X	X	X	X	V
009	B1BMP0002	B1BMP0002S001	12/22/2010		B-1	Culvert Inlet	Primary	Water	X	X	X	X	X	X	V
009	BGBMP0001	BGBMP0001S001	12/22/2010	9:39	Upgradient of CM-1	Co-located with A2SW0007	Primary	Water	X	X	X	X	X	X	
009	BGBMP0002	BGBMP0002S001	12/22/2010	13:53	Upgradient of CM-3	Co-located with LXSW0003	Primary	Water	X	X	X	X	X	X	2
009	EVBMP0001	EVBMP0001S001	12/22/2010	8:53	ELV	Culvert Inlet at corner of Helipad Road	Primary	Water	X	X	X	X	X	X	
009	EVBMP0002	EVBMP0002S001	12/22/2010	10:34	ELV	Helipad Spillway	Primary	Water	X	X	X	X	X	X	V
009	LPBMP0001	LPBMP0001S002	12/22/2010		Lower Parking Lot	Soil Stockpile Area	Primary	Water	X	X	X	X	X	X	V
009	ILBMP0002	ILBMP0002S001	12/22/2010	14:00	IEL	Road Culvert at CM-9	Primary	Water	X	X	X	X	X	X	
009	ILBMP0003	ILBMP0003S001	12/22/2010	14:15	A1LF	IEL Tributary drainage	Primary	Water	X	X	X	X	X	X	
009	LXBMP0002	LXBMP0002S001	12/22/2010	11:09	LOX	Unpaved road	Primary	Water	X	X	X	X	X	X	V
009	LXBMP0003	LXBMP0003S001	12/22/2010	11:45	LOX	East Unpaved road	Primary	Water	X	X	X	X	X	X	
008	HZBMP0002	HZBMP0002S002	1/3/2011	10:00	Happy Valley	Co-located with HZSW0004	Primary	Water	X	X	X	X	X	X	H
008	HZBMP0003	HZBMP0003S002	1/3/2011	9:15	Happy Valley	Co-located with HZSW0003	Primary	Water	X	X	X	X	X	X	
009	BGBMP0006	BGBMP0006S001	1/3/2011	10:21	Upgradient of CM-1	Co-located with A2SW0006	Primary	Water	X	X	X	X	X	X	V
009	BGBMP0007	BGBMP0007S001	1/3/2011	12:27	Upgradient of CM-3	Co-located with LXSW0001	Primary	Water	X	X	X	X	X	X	
009	EVBMP0002	EVBMP0002S002	1/3/2011	8:44	ELV	Helipad Spillway	Primary	Water	X	X	X	X	X	X	V
009	LXBMP0003	LXBMP0003S002	1/3/2011	11:13	LOX	East Unpaved road	Primary	Water	X	X	X	X	X	X	
009	A1BMP0001	A1BMP0001S002	1/3/2011	14:00	A1LF	Tributary drainage	Primary	Water	X	X	X	X	X	X	
009	ILBMP0003	ILBMP0003S002	1/3/2011	13:45	A1LF	IEL Tributary drainage	Primary	Water	X	X	X	X	X	X	
009	B1BMP0001	B1BMP0001S001	2/16/2011	12:35	B-1	Culvert Inlet; co-located with B1SW0010	Primary	Water	X	X	X	X			P
009	EVBMP0002	EVBMP0002S003	2/16/2011	11:51	ELV	Helipad Spillway	Primary	Water	C	C	C	C			
009	A1BMP0001	A1BMP0001S003	2/19/2011	11:25	A1LF	Tributary drainage	Primary	Water	X	X	X	X	X	X	
009	B1BMP0002	B1BMP0002S002	2/19/2011	8:10	B-1	Parking Lot Culvert	Primary	Water	X	X	X	X	X	X	V
009	B1BMP0002	B1BMP0002S003	2/26/2011	8:49	B-1	Parking Lot Culvert	Primary	Water	X	X	X	X	X	X	
008	HZBMP0003	HZBMP0003S003	2/26/2011	9:25	Happy Valley	Co-located with HZSW0003	Primary	Water	X	X	X	X			P
008	HZBMP0001	HZBMP0001S002	2/26/2011	11:25	Happy Valley	Co-located with HZSW0007	Primary	Water	X	X	X	X			P
009	BGBMP0007	BGBMP0007S002	2/26/2011	10:15	Upgradient of CM-3	Co-located with LXSW0001	Primary	Water	X	X	X	X			P
009	BGBMP0001	BGBMP0001S002	2/26/2011	9:50	Upgradient of CM-1	Co-located with A2SW0007	Primary	Water	X	X	X	X			P
009	EVBMP0002	EVBMP0002S004	2/26/2011	10:24	ELV	Helipad Spillway	Primary	Water	X	X	X	X	X	X	
009	LXBMP0003	LXBMP0003S003	2/26/2011	9:00	LOX	East Unpaved road	Primary	Water	X	X	X	X	X	X	
008	HZBMP0001	HZBMP0001S003	3/21/2011	10:45	Happy Valley	Co-located with HZSW0007	Primary	Water	X	X	X	X			P
008	HZBMP0002	HZBMP0002S003	3/21/2011	9:30	Happy Valley	Co-located with HZSW0004	Primary	Water	X	X	X	X	X	X	H
008	HZBMP0003	HZBMP0003S004	3/21/2011	8:55	Happy Valley	Co-located with HZSW0003	Primary	Water	X	X	X	X			P
009	A1BMP0001	A1BMP0001S004	3/21/2011	14:31	A1LF	Tributary drainage	Primary	Water	X	X	X	X	X	X	
009	ILBMP0003	ILBMP0003S003	3/21/2011	15:03	A1LF	IEL Tributary drainage	Primary	Water	X	X	X	X	X	X	

**Table 3-1
BMP Monitoring Sample Collection Matrix
2010-2011 Rainy Season
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Watershed	Object ID	Sample ID	Collection Date	Collection Time	Location	Position	Sample Type	Matrix	Total Recoverable Metals	Dissolved Metals	PSD	Turbidity	Dioxins (Method 1613)	Total Suspended Solids (Method 2540)	Comments
009	B1BMP0001	B1BMP0001S002	3/21/2011	9:58	B-1	Culvert Inlet; co-located with B1SW0010	Primary	Water	X	X	X	X	X	X	P
009	B1BMP0002	B1BMP0002S004	3/21/2011	8:45	B-1	Parking Lot Culvert	Primary	Water	X	X	X	X	X	X	
009	BGBMP0003	BGBMP0003S001	3/21/2011	9:01	Sage Ranch	Tributary drainage east of LOX	Primary	Water	X	X	X	X	X	X	
009	BGBMP0004	BGBMP0004S001	3/21/2011	9:27	Sage Ranch	Tributary drainage east of LOX	Primary	Water	X	X	X	X	X	X	
009	A2BMP0002	A2BMP0002S001	3/21/2011	14:50	A2LF	Sheetflow upgradient of dirt road	Primary	Water	X	X	X	X	X	X	
009	BGBMP0001	BGBMP0001S003	3/21/2011	9:20	Upgradient of CM-1	Co-located with A2SW0007	Primary	Water	X	X	X	X	X	X	P
009	BGBMP0002	BGBMP0002S002	3/21/2011	11:02	Upgradient of CM-3	Co-located with LXSW0003	Primary	Water	X	X	X	X	X	X	P
009	EVBMP0002	EVBMP0002S005	3/21/2011	10:05	ELV	Helipad Spillway	Primary	Water	X	X	X	X	X	X	
009	LXBMP0002	LXBMP0002S002	3/21/2011	8:22	LOX	Unpaved road	Primary	Water	X	X	X	X	X	X	
009	LXBMP0003	LXBMP0003S004	3/21/2011	8:34	LOX	East Unpaved road	Primary	Water	X	X	X	X	X	X	
008	HZBMP0001	HZBMP0001S004	3/24/2011	11:10	Happy Valley	Co-located with HZSW0007	Primary	Water	X	X	X	X	X	X	3
008	HZBMP0002	HZBMP0002S004	3/24/2011	10:00	Happy Valley	Co-located with HZSW0004	Primary	Water	X	X	X	X	X	X	3
008	HZBMP0003	HZBMP0003S005	3/24/2011	10:30	Happy Valley	Co-located with HZSW0003	Primary	Water	X	X	X	X	X	X	3
009	BGBMP0003	BGBMP0003S002	3/24/2011	14:11	Sage Ranch	Tributary drainage east of LOX	Primary	Water	X	X	X	X	X	X	
009	BGBMP0004	BGBMP0004S002	3/24/2011	13:58	Sage Ranch	Tributary drainage east of LOX	Primary	Water	X	X	X	X	X	X	
009	BGBMP0001	BGBMP0001S004	3/24/2011	12:41	Upgradient of CM-1	Co-located with A2SW0007	Primary	Water	X	X	X	X	X	X	3
009	BGBMP0002	BGBMP0002S003	3/24/2011	14:30	Upgradient of CM-3	Co-located with LXSW0003	Primary	Water	X	X	X	X	X	X	3
009	EVBMP0001	EVBMP0001S002	3/24/2011	10:05	ELV	Culvert Inlet at corner of Helipad Road	Primary	Water	X	X	X	X	X	X	
009	LXBMP0003	LXBMP0003S005	3/24/2011	13:09	LOX	East Unpaved road	Primary	Water	X	X	X	X	X	X	
009	EVBMP0002	EVBMP0002S006	3/25/2011	11:44	ELV	Helipad Spillway	Primary	Water	X	X	X	X	X	X	
009	A1BMP0001	A1BMP0001S005	3/25/2011	9:34	A1LF	Tributary drainage	Primary	Water	X	X	X	X	X	X	
009	ILBMP0002	ILBMP0002S002	3/25/2011	8:54	IEL	Road Culvert at CM-9	Primary	Water	X	X	X	X	X	X	
009	ILBMP0003	ILBMP0003S004	3/25/2011	9:56	A1LF	IEL Tributary drainage	Primary	Water	X	X	X	X	X	X	
009	ILBMP0001	ILBMP0001S001	3/25/2011	10:20	Lower Parking Lot	Spillway Chute	Primary	Water	X	X	X	X	X	X	
009	BGBMP0005	BGBMP0005S001	3/25/2011	10:45	Sage Ranch	Culvert Inlet north of B-1	Primary	Water	X	X	X	X	X	X	
009	B1BMP0001	B1BMP0001S003	3/25/2011	12:20	B-1	Culvert Inlet; co-located with B1SW0010	Primary	Water	X	X	X	X	X	X	3
009	B1BMP0002	B1BMP0002S005	3/25/2011	11:20	B-1	Parking Lot Culvert	Primary	Water	X	X	X	X	X	X	
009	B1BMP0002	B1BMP0002S006	5/17/2011	10:30	B-1	Parking Lot Culvert	Primary	Water	X	X	X	X	X	X	
009	ILBMP0001	ILBMP0001S002	5/17/2011	9:50	Lower Parking Lot	Spillway Chute	Primary	Water	X	X	X	X	X	X	

Notes:

- 1 - Co-located Performance Monitoring sample collected on a different day during the same rain event
- 2 - Co-located Performance Monitoring sample collected at an alternate location and different day during the same rain event
- 3 - Co-located Performance Monitoring sample not re-collected during continued rain event
- C - Analysis was cancelled because rainwater released from storage in Baker tank mixed with sample at collection point
- H - Co-located Performance Monitoring sample on hold
- P - Used Cd, Cu, Hg, and/or Pb analysis from co-located Performance Monitoring sample
- X - Sample was analyzed
- V - Data validation performed for dioxins

Sample Totals

008 BMP Monitoring	13
009 BMP Monitoring	55
Total BMP Monitoring	68

Table 3-2
BMP Monitoring Sample Results, Outfall 008 Watershed
2010-2011 Rainy Season
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		Object Name	HZBMP0001	HZBMP0002	HZBMP0003	HZBMP0002	HZBMP0003	HZSW0003	HZBMP0001	HZSW0007
		Sample Name	HZBMP0001S001	HZBMP0002S001	HZBMP0003S001	HZBMP0002S002	HZBMP0003S002	HZSW0003S009	HZBMP0001S002	HZSW0007S008
		Sample Date	12/22/2010	12/22/2010	12/22/2010	1/3/2011	1/3/2011	1/3/2011	2/26/2011	2/26/2011
		Sample Type	BMP	BMP	BMP	BMP	BMP	Perf Mon	BMP	Perf Mon
		Location	Happy Valley	Happy Valley	Happy Valley	Happy Valley	Happy Valley	DG (CYN-1, DRG-1)	Happy Valley	DG (HVS)
		Rain Event	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	January 2-3, 2011	January 2-3, 2011	January 2-3, 2011	February 25-26, 2011	February 25-26, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS										
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND	ND	ND	see HZSW0003S009	ND	see HZSW0007S008	ND
INORGANICS										
Aluminum	mg/L	-	1.9 *	0.88 *	1.3 *	<0.040 *	0.055 *	--	0.54 *	--
Aluminum, dissolved	mg/L	-	0.17 *	0.29 *	0.35 *	<0.040 *	<0.040 *	--	<0.040 *	--
Antimony	µg/L	6.0	<0.30 *	<0.30 *	<0.30 *	<0.30 *	<0.30 *	--	0.46 B, J*	--
Antimony, dissolved	µg/L	-	<0.30 *	<0.30 *	<0.30 *	<0.30 *	0.84 Ja*	--	<0.30 *	--
Arsenic	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	--	<7.0 *	--
Arsenic, dissolved	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	--	<7.0 *	--
Barium	mg/L	-	0.033 *	0.015 *	0.016 *	0.011 *	0.014 *	--	0.034 *	--
Barium, dissolved	mg/L	-	0.022 *	0.011 *	0.011 *	0.012 *	0.015 *	--	0.031 *	--
Beryllium	µg/L	-	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *	--	<0.90 *	--
Beryllium, dissolved	µg/L	-	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *	--	<0.90 *	--
Boron	mg/L	1.0	0.097 B*	0.078 B*	0.076 B*	0.068 *	0.067 *	--	0.084 *	--
Boron, dissolved	mg/L	-	0.094 B*	0.078 B*	0.077 B*	0.069 B*	0.077 B*	--	0.090 *	--
Cadmium	µg/L	3.1	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	--	0.14 B, J*	--
Cadmium, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	--	<0.10 *	--
Chromium	µg/L	-	2.8 Ja*	<2.0 *	<2.0 *	<2.0 *	2.4 Ja*	--	<2.0 *	--
Chromium, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	--	<2.0 *	--
Cobalt	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	--	<2.0 *	--
Cobalt, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	--	<2.0 *	--
Copper	µg/L	14	3.7 *	2.3 *	2.2 *	1.4 Ja*	see HZSW0003S009	1.4 J*	see HZSW0007S008	4.6 B*
Copper, dissolved	µg/L	-	2.6 *	1.9 Ja*	1.6 Ja*	1.7 Ja*	1.8 Ja*	--	1.4 J*	--
Iron	mg/L	-	1.8 *	0.93 *	1.3 *	0.018 Ja*	0.12 B*	--	0.69 *	--
Iron, dissolved	mg/L	-	0.18 *	0.27 *	0.30 *	0.022 Ja*	0.059 *	--	0.040 B*	--
Lead	µg/L	5.2	1.2 *	0.90 Ja*	1.2 *	<0.20 *	see HZSW0003S009	<0.20 *	see HZSW0007S008	0.48 Ja*
Lead, dissolved	µg/L	-	<0.20 *	0.21 Ja*	0.23 Ja*	<0.20 *	<0.20 *	--	<0.20 *	--
Manganese	µg/L	-	22 *	12 Ja*	16 Ja*	<7.0 *	<7.0 *	--	15 J*	--
Manganese, dissolved	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	--	<7.0 *	--
Mercury	µg/L	0.13	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	--	<0.10 *	--
Mercury, dissolved	µg/L	-	<0.10 *	<0.10 *	0.13 Ja*	<0.10 *	<0.10 *	--	<0.10 *	--
Nickel	µg/L	100	2.8 Ja*	2.4 Ja*	2.7 Ja*	<2.0 *	2.3 Ja*	--	<2.0 *	--
Nickel, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	2.1 Ja*	3.3 Ja*	--	<2.0 *	--
Selenium	µg/L	5	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	--	<0.50 *	--
Selenium, dissolved	µg/L	-	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	--	<0.50 *	--
Silver	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	--	<0.10 *	--
Silver, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	--	<0.10 *	--
Thallium	µg/L	2.0	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *	--	<0.20 *	--
Thallium, dissolved	µg/L	-	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *	--	<0.20 *	--
Vanadium	µg/L	-	5.4 Ja*	<3.0 *	3.3 Ja*	<3.0 *	<3.0 *	--	<3.0 *	--
Vanadium, dissolved	µg/L	-	<3.0 *	<3.0 *	<3.0 *	<3.0 *	<3.0 *	--	<3.0 *	--
Zinc	µg/L	159	11 Ja*	4.4 Ja*	4.8 Ja*	<4.0 *	<4.0 *	--	7.2 J*	--

Table 3-2
BMP Monitoring Sample Results, Outfall 008 Watershed
2010-2011 Rainy Season
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		Object Name	HZBMP0001	HZBMP0002	HZBMP0003	HZBMP0002	HZBMP0003	HZSW0003	HZBMP0001	HZSW0007
		Sample Name	HZBMP0001S001	HZBMP0002S001	HZBMP0003S001	HZBMP0002S002	HZBMP0003S002	HZSW0003S009	HZBMP0001S002	HZSW0007S008
		Sample Date	12/22/2010	12/22/2010	12/22/2010	1/3/2011	1/3/2011	1/3/2011	2/26/2011	2/26/2011
		Sample Type	BMP	BMP	BMP	BMP	BMP	Perf Mon	BMP	Perf Mon
		Location	Happy Valley	Happy Valley	Happy Valley	Happy Valley	Happy Valley	DG (CYN-1, DRG-1)	Happy Valley	DG (HVS)
		Rain Event	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	January 2-3, 2011	January 2-3, 2011	January 2-3, 2011	February 25-26, 2011	February 25-26, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Zinc, Dissolved	µg/L	-	<4.0 *	<4.0 *	<4.0 *	<4.0 *	<4.0 *	--	<4.0 *	--
MISC										
Total Settleable Solids	ml/L	-	<0.10 *	0.30 *	0.10 *	<0.10 *	<0.10 *	--	--	--
Total Suspended Solids	mg/L	-	20 H-1*	12 H-1*	21 H-1*	1.0 H-1, J*	see HZSW0003S009	1.0 J*	see HZSW0007S008	23 *
Turbidity	NTU	-	32 *	12 *	16 *	0.33 Ja*	1.2 *	--	13 *	--
FIELD MEASUREMENTS										
Conductivity (Field)	mS	-	0.213 *	0.083 *	0.093 *	NR *	see HZSW0003S009	0.239 *	see HZSW0007S008	0.465 *
pH (Field)	pH units	6.5 - 8.5	7.04 *	7.22 *	7.19 *	NR *	see HZSW0003S009	7.82 *	see HZSW0007S008	9.11 *
Temperature	°C	30	11.1 *	12.8 *	12.6 *	NR *	see HZSW0003S009	8.2 *	see HZSW0007S008	8.9 *
Turbidity (Field)	NTU	-	95 *	97 *	94 *	NR *	see HZSW0003S009	1 *	see HZSW0007S008	9 *
RAINFALL MEASUREMENTS †										
Intensity (Ave) - Pre-Sampling	in/hr	-	0.052	0.052	0.052	0.017	0.017	0.017	0.055	0.055
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.054	0.054	0.014	0.014	0.014	0.048	0.048
Intensity (Max) - Pre-Sampling	in/hr	-	0.37	0.37	0.37	0.12	0.12	0.12	0.26	0.26
Intensity (Max) - Rain Event	in/hr	-	0.37	0.37	0.37	0.12	0.12	0.12	0.26	0.26
Total - Pre-Sampling	in	-	6.77	6.64	6.6	0.38	0.38	0.38	1.5	1.5
Total - Rain Event	in	-	7.22	7.22	7.22	0.38	0.38	0.38	1.5	1.5

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-2
BMP Monitoring Sample Results, Outfall 008 Watershed
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		Object Name	HZBMP0003	HZSW0003	HZBMP0001	HZSW0007	HZBMP0002	HZBMP0003	HZSW0003	HZBMP0001
		Sample Name	HZBMP0003S003	HZSW0003S010	HZBMP0001S003	HZSW0007S009	HZBMP0002S003	HZBMP0003S004	HZSW0003S011	HZBMP0001S004
		Sample Date	2/26/2011	2/26/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/24/2011
		Sample Type	BMP	Perf Mon	BMP	Perf Mon	BMP	BMP	Perf Mon	BMP
		Location	Happy Valley	DG (CYN-1, DRG-1)	Happy Valley	DG (HVS)	Happy Valley	Happy Valley	DG (CYN-1, DRG-1)	Happy Valley
		Rain Event	February 25-26, 2011	February 25-26, 2011	March 18-27, 2011					
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS										
TCDD TEQ_NoDNQ	µg/L	2.80E-08	see HZSW0003S010	ND	see HZSW0007S009	ND	ND	see HZSW0003S011	ND	ND
INORGANICS										
Aluminum	mg/L	-	0.66 *	--	0.42 *	--	0.55 *	0.62 *	--	2.8 *
Aluminum, dissolved	mg/L	-	0.17 *	--	0.16 *	--	0.51 *	0.47 *	--	<0.040 *
Antimony	µg/L	6.0	0.44 B, J*	--	0.30 Ja*	--	<0.30 *	<0.30 *	--	0.36 Ja*
Antimony, dissolved	µg/L	-	0.34 J*	--	0.41 Ja*	--	<0.30 *	<0.30 *	--	0.33 Ja*
Arsenic	µg/L	-	<7.0 *	--	<7.0 *	--	<7.0 *	<7.0 *	--	<7.0 *
Arsenic, dissolved	µg/L	-	<7.0 *	--	<7.0 *	--	<7.0 *	<7.0 *	--	<7.0 *
Barium	mg/L	-	0.014 *	--	0.031 *	--	0.012 *	0.012 *	--	0.063 *
Barium, dissolved	mg/L	-	0.016 *	--	0.031 *	--	0.012 *	0.011 *	--	0.042 *
Beryllium	µg/L	-	<0.90 *	--	<0.90 *	--	<0.90 *	<0.90 *	--	1.7 Ja*
Beryllium, dissolved	µg/L	-	<0.90 *	--	<0.90 *	--	<0.90 *	<0.90 *	--	<0.90 *
Boron	mg/L	1.0	0.050 *	--	0.090 *	--	0.070 *	0.070 *	--	0.094 *
Boron, dissolved	mg/L	-	0.055 *	--	0.094 *	--	0.067 *	0.066 *	--	0.091 *
Cadmium	µg/L	3.1	0.12 B, J*	--	<0.10 *	--	<0.10 *	<0.10 *	--	<0.10 *
Cadmium, dissolved	µg/L	-	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *	--	<0.10 *
Chromium	µg/L	-	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *	--	4.2 Ja*
Chromium, dissolved	µg/L	-	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *	--	<2.0 *
Cobalt	µg/L	-	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *	--	<2.0 *
Cobalt, dissolved	µg/L	-	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *	--	<2.0 *
Copper	µg/L	14	see HZSW0003S010	4.1 B*	see HZSW0007S009	2.9	2.2 *	see HZSW0003S011	2.0	5.4 *
Copper, dissolved	µg/L	-	0.65 J*	--	2.7 *	--	1.6 Ja*	1.7 Ja*	--	2.9 *
Iron	mg/L	-	0.90 *	--	0.45 *	--	0.59 *	0.66 *	--	3.6 *
Iron, dissolved	mg/L	-	0.23 B*	--	0.18 *	--	0.42 *	0.39 *	--	<0.015 *
Lead	µg/L	5.2	see HZSW0003S010	0.51 Ja*	see HZSW0007S009	0.52 J	0.65 Ja*	see HZSW0003S011	0.64 J	2.1 *
Lead, dissolved	µg/L	-	<0.20 *	--	<0.20 *	--	0.27 Ja*	0.23 Ja*	--	<0.20 *
Manganese	µg/L	-	15 J*	--	<7.0 *	--	<7.0 *	<7.0 *	--	60 *
Manganese, dissolved	µg/L	-	<7.0 *	--	<7.0 *	--	<7.0 *	<7.0 *	--	<7.0 *
Mercury	µg/L	0.13	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *	--	<0.10 *
Mercury, dissolved	µg/L	-	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *	--	<0.10 *
Nickel	µg/L	100	2.1 J*	--	<2.0 *	--	<2.0 *	<2.0 *	--	3.4 Ja*
Nickel, dissolved	µg/L	-	<2.0 *	--	2.0 Ja*	--	2.4 Ja*	2.2 Ja*	--	<2.0 *
Selenium	µg/L	5	<0.50 *	--	<0.50 *	--	<0.50 *	<0.50 *	--	<0.50 *
Selenium, dissolved	µg/L	-	<0.50 *	--	<0.50 *	--	<0.50 *	<0.50 *	--	<0.50 *
Silver	µg/L	-	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *	--	<0.10 *
Silver, dissolved	µg/L	-	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *	--	<0.10 *
Thallium	µg/L	2.0	<0.20 *	--	0.26 Ja*	--	<0.20 *	<0.20 *	--	0.21 Ja*
Thallium, dissolved	µg/L	-	<0.20 *	--	<0.20 *	--	<0.20 *	<0.20 *	--	<0.20 *
Vanadium	µg/L	-	<3.0 *	--	3.0 Ja*	--	<3.0 *	3.0 Ja*	--	9.5 Ja*
Vanadium, dissolved	µg/L	-	<3.0 *	--	<3.0 *	--	<3.0 *	<3.0 *	--	<3.0 *
Zinc	µg/L	159	4.9 J*	--	4.2 Ja*	--	<4.0 *	7.9 Ja*	--	10 Ja*

Table 3-2
BMP Monitoring Sample Results, Outfall 008 Watershed
2010-2011 Rainy Season
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		Object Name	HZBMP0003	HZSW0003	HZBMP0001	HZSW0007	HZBMP0002	HZBMP0003	HZSW0003	HZBMP0001
		Sample Name	HZBMP0003S003	HZSW0003S010	HZBMP0001S003	HZSW0007S009	HZBMP0002S003	HZBMP0003S004	HZSW0003S011	HZBMP0001S004
		Sample Date	2/26/2011	2/26/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/24/2011
		Sample Type	BMP	Perf Mon	BMP	Perf Mon	BMP	BMP	Perf Mon	BMP
		Location	Happy Valley	DG (CYN-1, DRG-1)	Happy Valley	DG (HVS)	Happy Valley	Happy Valley	DG (CYN-1, DRG-1)	Happy Valley
		Rain Event	February 25-26, 2011	February 25-26, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT							
Zinc, Dissolved	µg/L	-	<4.0 *	--	<4.0 *	--	<4.0 *	<4.0 *	--	<4.0 *
MISC										
Total Settleable Solids	ml/L	-	--	--	--	--	--	--	--	--
Total Suspended Solids	mg/L	-	see HZSW0003S010	1.0 Ja*	see HZSW0007S009	6.0 J	<1.0 *	see HZSW0003S011	6.0 J	230 *
Turbidity	NTU	-	12 *	--	14 *	17 J	14 *	15 *	14 J	12 *
FIELD MEASUREMENTS										
Conductivity (Field)	mS	-	see HZSW0003S010	0.181 *	see HZSW0007S009	0.276 *	0.13 *	see HZSW0003S011	0.133 *	0.476 *
pH (Field)	pH units	6.5 - 8.5	see HZSW0003S010	8.93 *	see HZSW0007S009	7.18 *	6.59 *	see HZSW0003S011	6.33 *	7.23 *
Temperature	°C	30	see HZSW0003S010	8.7 *	see HZSW0007S009	7.8 *	10.7 *	see HZSW0003S011	10.3 *	11.6 *
Turbidity (Field)	NTU	-	see HZSW0003S010	7 *	see HZSW0007S009	10 *	10 *	see HZSW0003S011	10 *	NR *
RAINFALL MEASUREMENTS †										
Intensity (Ave) - Pre-Sampling	in/hr	-	0.059	0.06	0.081	0.081	0.082	0.083	0.083	0.039
Intensity (Ave) - Rain Event	in/hr	-	0.048	0.048	0.013	0.03	0.013	0.013	0.03	0.013
Intensity (Max) - Pre-Sampling	in/hr	-	0.26	0.26	Not Available (>0.4)					
Intensity (Max) - Rain Event	in/hr	-	0.26	0.26	Not Available (>0.4)					
Total - Pre-Sampling	in	-	1.5	1.5	4.81	4.81	4.81	4.81	4.81	5.09
Total - Rain Event	in	-	1.5	1.5	6.00	6.00	6.00	6.00	6.00	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-2
BMP Monitoring Sample Results, Outfall 008 Watershed
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		Object Name	HZBMP0002	HZBMP0003
		Sample Name	HZBMP0002S004	HZBMP0003S005
		Sample Date	3/24/2011	3/24/2011
		Sample Type	BMP	BMP
		Location	Happy Valley	Happy Valley
		Rain Event	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT
DIOXINS				
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND
INORGANICS				
Aluminum	mg/L	-	0.043 Ja*	0.15 *
Aluminum, dissolved	mg/L	-	<0.040 *	<0.040 *
Antimony	µg/L	6.0	<0.30 *	<0.30 *
Antimony, dissolved	µg/L	-	<0.30 *	<0.30 *
Arsenic	µg/L	-	<7.0 *	<7.0 *
Arsenic, dissolved	µg/L	-	<7.0 *	<7.0 *
Barium	mg/L	-	0.011 *	0.011 *
Barium, dissolved	mg/L	-	0.011 *	0.011 *
Beryllium	µg/L	-	<0.90 *	<0.90 *
Beryllium, dissolved	µg/L	-	<0.90 *	<0.90 *
Boron	mg/L	1.0	0.061 *	0.061 *
Boron, dissolved	mg/L	-	0.064 *	0.066 *
Cadmium	µg/L	3.1	<0.10 *	<0.10 *
Cadmium, dissolved	µg/L	-	<0.10 *	<0.10 *
Chromium	µg/L	-	<2.0 *	<2.0 *
Chromium, dissolved	µg/L	-	<2.0 *	<2.0 *
Cobalt	µg/L	-	<2.0 *	<2.0 *
Cobalt, dissolved	µg/L	-	<2.0 *	<2.0 *
Copper	µg/L	14	0.94 Ja*	1.3 Ja*
Copper, dissolved	µg/L	-	1.6 Ja*	1.6 Ja*
Iron	mg/L	-	0.082 *	0.15 *
Iron, dissolved	mg/L	-	0.046 *	0.070 *
Lead	µg/L	5.2	<0.20 *	<0.20 *
Lead, dissolved	µg/L	-	<0.20 *	<0.20 *
Manganese	µg/L	-	<7.0 *	<7.0 *
Manganese, dissolved	µg/L	-	<7.0 *	<7.0 *
Mercury	µg/L	0.13	<0.10 *	<0.10 *
Mercury, dissolved	µg/L	-	<0.10 *	<0.10 *
Nickel	µg/L	100	<2.0 *	<2.0 *
Nickel, dissolved	µg/L	-	<2.0 *	<2.0 *
Selenium	µg/L	5	<0.50 *	<0.50 *
Selenium, dissolved	µg/L	-	<0.50 *	<0.50 *
Silver	µg/L	-	<0.10 *	<0.10 *
Silver, dissolved	µg/L	-	<0.10 *	<0.10 *
Thallium	µg/L	2.0	<0.20 *	<0.20 *
Thallium, dissolved	µg/L	-	<0.20 *	<0.20 *
Vanadium	µg/L	-	<3.0 *	<3.0 *
Vanadium, dissolved	µg/L	-	<3.0 *	<3.0 *
Zinc	µg/L	159	<4.0 *	<4.0 *

Table 3-2
BMP Monitoring Sample Results, Outfall 008 Watershed
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		Object Name	HZBMP0002	HZBMP0003
		Sample Name	HZBMP0002S004	HZBMP0003S005
		Sample Date	3/24/2011	3/24/2011
		Sample Type	BMP	BMP
		Location	Happy Valley	Happy Valley
		Rain Event	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT
Zinc, Dissolved	µg/L	-	<4.0 *	<4.0 *
MISC				
Total Settleable Solids	ml/L	-	--	--
Total Suspended Solids	mg/L	-	<1.0 *	<1.0 *
Turbidity	NTU	-	1.3 *	2.0 *
FIELD MEASUREMENTS				
Conductivity (Field)	mS	-	0.164 *	0.168 *
pH (Field)	pH units	6.5 - 8.5	6.67 *	6.47 *
Temperature	°C	30	10.6 *	11.4 *
Turbidity (Field)	NTU	-	NR *	NR *
RAINFALL MEASUREMENTS †				
Intensity (Ave) - Pre-Sampling	in/hr	-	0.039	0.039
Intensity (Ave) - Rain Event	in/hr	-	0.013	0.013
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	5.09	5.09
Total - Rain Event	in	-	6.00	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	A1BMP0001	B1BMP0002	BGBMP0001	A2SW0007	BGBMP0002	EVBMP0001	EVBMP0002
		Sample Name	A1BMP0001S001	B1BMP0002S001	BGBMP0001S001	A2SW0007S001	BGBMP0002S001	EVBMP0001S001	EVBMP0002S001
		Sample Date	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010
		Sample Type	BMP	BMP	BMP	Perf Mon	BMP	BMP	BMP
		Location	A1LF Tributary Drainage	Parking Lot Culvert	Upgradient of CM-1	Upgradient of CM-1	Upgradient of CM-3	Culvert at Helipad Rd	ELV Helipad Spillway
		Rain Event	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	7.65E-08	see A2SW0007S001	ND	2.70E-10	ND	7.13E-08
INORGANICS									
Aluminum	mg/L	-	2.4 *	5.4 *	0.60 *	--	32 *	0.65 *	1.3 *
Aluminum, dissolved	mg/L	-	0.17 *	0.41 *	0.061 *	--	0.66 *	0.046 Ja*	0.061 *
Antimony	µg/L	6.0	1.0 Ja*	0.34 Ja*	<0.30 *	--	<0.60 RL1*	0.33 Ja*	0.51 Ja*
Antimony, dissolved	µg/L	-	0.76 Ja*	<0.30 *	<0.30 *	--	<0.30 *	<0.30 *	0.37 Ja*
Arsenic	µg/L	-	<7.0 *	7.4 Ja*	<7.0 *	--	22 *	7.0 Ja*	<7.0 *
Arsenic, dissolved	µg/L	-	<7.0 *	<7.0 *	<7.0 *	--	<7.0 *	8.2 Ja*	<7.0 *
Barium	mg/L	-	0.032 *	0.057 *	0.020 *	--	0.34 *	0.020 *	0.020 *
Barium, dissolved	mg/L	-	0.017 *	0.015 *	0.015 *	--	0.0086 Ja*	0.017 *	0.0065 Ja*
Beryllium	µg/L	-	<0.90 *	<0.90 *	<0.90 *	--	2.2 RL1, Ja*	<0.90 *	<0.90 *
Beryllium, dissolved	µg/L	-	<0.90 *	<0.90 *	<0.90 *	--	<0.90 *	<0.90 *	<0.90 *
Boron	mg/L	1.0	0.045 B, Ja*	0.037 B, Ja*	0.061 B*	--	0.043 RL1, B, Ja*	0.035 B, Ja*	<0.020 *
Boron, dissolved	mg/L	-	0.047 B, Ja*	0.041 B, Ja*	0.065 B*	--	0.049 B, Ja*	0.040 B, Ja*	<0.020 *
Cadmium	µg/L	4.0	0.36 Ja*	0.15 Ja*	<0.10 *	--	0.87 RL1, Ja*	<0.10 *	0.13 Ja*
Cadmium, dissolved	µg/L	-	0.17 Ja*	<0.10 *	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *
Chromium	µg/L	-	3.1 Ja*	8.7 *	<2.0 *	--	41 *	<2.0 *	<2.0 *
Chromium, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *
Cobalt	µg/L	-	<2.0 *	2.1 Ja*	<2.0 *	--	15 Ja*	<2.0 *	<2.0 *
Cobalt, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *
Copper	µg/L	14	5.3 *	6.7 *	2.6 *	--	19	2.5 *	4.0 *
Copper, dissolved	µg/L	-	3.3 *	2.8 *	2.2 *	--	1.1 Ja*	1.9 Ja*	2.2 *
Iron	mg/L	-	2.2 *	6.3 *	0.71 *	--	39 *	0.79 *	1.5 *
Iron, dissolved	mg/L	-	0.16 *	0.33 *	0.075 *	--	0.43 *	0.046 *	0.060 *
Lead	µg/L	5.2	2.5 *	5.8 *	see A2SW0007S001	0.65 J*	64	1.9 *	3.6 *
Lead, dissolved	µg/L	-	0.26 Ja*	0.44 Ja*	<0.20 *	--	0.26 Ja*	0.29 Ja*	0.28 Ja*
Manganese	µg/L	-	32 *	110 *	12 Ja*	--	1100 *	13 Ja*	30 *
Manganese, dissolved	µg/L	-	<7.0 *	<7.0 *	<7.0 *	--	<7.0 *	<7.0 *	<7.0 *
Mercury	µg/L	0.13	<0.10 *	<0.10 *	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *
Mercury, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *
Nickel	µg/L	100	2.6 Ja*	6.9 Ja*	2.5 Ja*	--	36 *	<2.0 *	<2.0 *
Nickel, dissolved	µg/L	-	<2.0 *	2.0 Ja*	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *
Selenium	µg/L	-	<0.50 *	<0.50 *	<0.50 *	--	<1.0 RL1*	<0.50 *	<0.50 *
Selenium, dissolved	µg/L	-	<0.50 *	<0.50 *	<0.50 *	--	<0.50 *	<0.50 *	<0.50 *
Silver	µg/L	-	0.13 Ja*	<0.10 *	<0.10 *	--	0.20 RL1, Ja*	<0.10 *	<0.10 *
Silver, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *
Thallium	µg/L	2.0	<0.20 *	<0.20 *	<0.20 *	--	0.43 RL1, Ja*	<0.20 *	<0.20 *
Thallium, dissolved	µg/L	-	<0.20 *	<0.20 *	<0.20 *	--	<0.20 *	<0.20 *	<0.20 *
Vanadium	µg/L	-	4.7 Ja*	14 *	<3.0 *	--	75 *	3.2 Ja*	3.4 Ja*
Vanadium, dissolved	µg/L	-	<3.0 *	<3.0 *	<3.0 *	--	<3.0 *	<3.0 *	<3.0 *
Zinc	µg/L	159	32 *	65 *	6.8 Ja*	--	140 *	8.9 Ja*	72 *

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	A1BMP0001	B1BMP0002	BGBMP0001	A2SW0007	BGBMP0002	EVBMP0001	EVBMP0002
		Sample Name	A1BMP0001S001	B1BMP0002S001	BGBMP0001S001	A2SW0007S001	BGBMP0002S001	EVBMP0001S001	EVBMP0002S001
		Sample Date	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010	12/22/2010
		Sample Type	BMP	BMP	BMP	Perf Mon	BMP	BMP	BMP
		Location	A1LF Tributary Drainage	Parking Lot Culvert	Upgradient of CM-1	Upgradient of CM-1	Upgradient of CM-3	Culvert at Helipad Rd	ELV Helipad Spillway
		Rain Event	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Zinc, Dissolved	µg/L	-	13 Ja*	16 Ja*	<4.0 *	--	<4.0 *	7.6 Ja*	45 *
MISC									
Total Settleable Solids	ml/L	-	<0.10 *	0.20 *	0.20 *	--	2.0 *	<0.10 *	<0.10 *
Total Suspended Solids	mg/L	-	22 H-1*	52 H-1*	see A2SW0007S001	4.0 J*	750 H-1*	10 H-1*	34 H-1*
Turbidity	NTU	-	53 *	63 *	9.9 *	--	77 *	12 *	32 *
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.114 *	NR *	see A2SW0007S001	0.171 *	0.9 *	0.168 *	0.049 *
pH (Field)	pH units	6.5 - 8.5	7.03 *	NR *	see A2SW0007S001	7.46 *	7.47 *	7.01 *	7.49 *
Temperature	°C	30	12.7 *	NR *	see A2SW0007S001	12.3 *	12.9	12.7	12.9
Turbidity (Field)	NTU	-	96 *	NR *	see A2SW0007S001	7 *	565 *	12 *	100 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.054	0.052	0.052	0.052	0.054	0.052	0.052
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.054	0.054	0.054	0.054	0.054	0.054
Intensity (Max) - Pre-Sampling	in/hr	-	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Intensity (Max) - Rain Event	in/hr	-	0.37	0.37	0.37	0.37	0.37	0.37	0.37
Total - Pre-Sampling	in	-	7.22	6.61	6.64	6.64	7.21	6.63	6.74
Total - Rain Event	in	-	7.22	7.22	7.22	7.22	7.22	7.22	7.22

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	ILBMP0002	ILBMP0003	LPBMP0001	LPBMP0001	LXBMP0002	LXBMP0003	A1BMP0001
		Sample Name	ILBMP0002S001	ILBMP0003S001	LPBMP0001S001	LPBMP0001S002	LXBMP0002S001	LXBMP0003S001	A1BMP0001S002
		Sample Date	12/22/2010	12/22/2010	12/18/2010	12/22/2010	12/22/2010	12/22/2010	1/3/2011
		Sample Type	BMP	BMP	BMP	BMP	BMP	BMP	BMP
		Location	Road Culvert at CM-9	IEL Tributary Drainage	Lower Parking Lot	Lower Parking Lot	LOX Unpaved Road	East LOX Unpaved Road	A1LF Tributary Drainage
		Rain Event	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	January 2-3, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND	4.49E-08	1.99E-07	3.48E-08	ND	ND
INORGANICS									
Aluminum	mg/L	-	1.3 *	0.83 *	8.7 *	2.8 *	10 *	1.1 *	<0.040 *
Aluminum, dissolved	mg/L	-	0.38 *	0.48 *	<0.040 *	0.34 *	0.097 *	0.088 *	<0.040 *
Antimony	µg/L	6.0	<0.30 *	0.50 Ja*	0.65 Ja*	<0.30 *	0.86 Ja*	<0.30 *	1.3 Ja*
Antimony, dissolved	µg/L	-	<0.30 *	0.46 Ja*	<0.30 *	<0.30 *	0.54 Ja*	<0.30 *	1.4 Ja*
Arsenic	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	7.4 Ja*	<7.0 C*	<7.0 *
Arsenic, dissolved	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *
Barium	mg/L	-	0.020 *	0.017 *	0.12 *	0.033 *	0.10 *	0.024 *	0.057 *
Barium, dissolved	mg/L	-	0.013 *	0.017 *	0.052 *	0.0095 Ja*	0.014 *	0.015 *	0.055 *
Beryllium	µg/L	-	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *
Beryllium, dissolved	µg/L	-	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *
Boron	mg/L	1.0	0.051 B*	0.17 B*	<0.020 *	<0.020 *	0.053 B*	0.051 B*	0.13 *
Boron, dissolved	mg/L	-	0.051 B*	0.18 B*	0.030 Ja*	<0.020 *	0.052 B*	0.054 B*	0.13 B*
Cadmium	µg/L	4.0	<0.10 *	<0.10 *	0.48 Ja*	0.15 Ja*	0.12 Ja*	<0.10 *	0.51 Ja*
Cadmium, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	0.50 Ja*
Chromium	µg/L	-	2.2 Ja*	2.0 Ja*	16 *	4.0 Ja*	19 *	2.0 Ja*	<2.0 *
Chromium, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Cobalt	µg/L	-	<2.0 *	<2.0 *	4.6 Ja*	<2.0 *	3.9 Ja*	<2.0 *	<2.0 *
Cobalt, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Copper	µg/L	14	3.4 *	4.8 *	14 *	4.5 *	14 *	2.9 *	4.1 *
Copper, dissolved	µg/L	-	2.8 *	4.0 *	2.1 *	1.2 Ja*	5.6 *	2.0 *	4.1 *
Iron	mg/L	-	1.1 *	0.64 *	13 *	3.0 *	14 *	1.3 *	0.078 B*
Iron, dissolved	mg/L	-	0.24 *	0.35 *	0.095 *	0.31 *	0.12 *	0.12 *	<0.015 *
Lead	µg/L	5.2	3.8 *	0.48 RL1, Ja*	15 *	4.5 *	6.9 *	0.90 Ja*	<0.20 *
Lead, dissolved	µg/L	-	1.1 *	0.27 Ja*	0.47 Ja*	0.41 Ja*	<0.20 *	<0.20 *	<0.20 *
Manganese	µg/L	-	16 Ja*	<7.0 *	240 *	48 *	190 *	19 Ja*	<7.0 *
Manganese, dissolved	µg/L	-	<7.0 *	<7.0 *	14 Ja*	8.8 Ja*	<7.0 *	<7.0 *	<7.0 *
Mercury	µg/L	0.13	<0.10 *	<0.10 *	0.15 Ja*	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Mercury, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Nickel	µg/L	100	2.1 Ja*	3.1 Ja*	11 *	2.4 Ja*	13 *	2.9 Ja*	2.0 Ja*
Nickel, dissolved	µg/L	-	<2.0 *	3.2 Ja*	<2.0 *	<2.0 *	<2.0 *	2.3 Ja*	2.1 Ja*
Selenium	µg/L	-	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *
Selenium, dissolved	µg/L	-	<0.50 *	<0.50 *	0.67 Ja*	<0.50 *	<0.50 *	<0.50 *	<0.50 *
Silver	µg/L	-	<0.10 *	<0.10 *	0.28 Ja*	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Silver, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Thallium	µg/L	2.0	<0.20 *	<0.20 *	0.20 Ja*	<0.20 *	<0.20 *	<0.20 *	<0.20 *
Thallium, dissolved	µg/L	-	<0.20 *	<0.20 *	0.29 Ja*	<0.20 *	<0.20 *	<0.20 *	<0.20 *
Vanadium	µg/L	-	3.4 Ja*	<3.0 *	23 *	6.9 Ja*	30 *	3.2 Ja*	<3.0 *
Vanadium, dissolved	µg/L	-	<3.0 *	<3.0 *	<3.0 *	<3.0 *	<3.0 *	<3.0 *	<3.0 *
Zinc	µg/L	159	20 *	7.2 Ja*	91 *	28 *	49 *	6.6 Ja*	7.5 Ja*

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	ILBMP0002	ILBMP0003	LPBMP0001	LPBMP0001	LXBMP0002	LXBMP0003	A1BMP0001
		Sample Name	ILBMP0002S001	ILBMP0003S001	LPBMP0001S001	LPBMP0001S002	LXBMP0002S001	LXBMP0003S001	A1BMP0001S002
		Sample Date	12/22/2010	12/22/2010	12/18/2010	12/22/2010	12/22/2010	12/22/2010	1/3/2011
		Sample Type	BMP	BMP	BMP	BMP	BMP	BMP	BMP
		Location	Road Culvert at CM-9	IEL Tributary Drainage	Lower Parking Lot	Lower Parking Lot	LOX Unpaved Road	East LOX Unpaved Road	A1LF Tributary Drainage
		Rain Event	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	December 17-22, 2010	January 2-3, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Zinc, Dissolved	µg/L	-	14 Ja*	<4.0 *	4.0 Ja*	13 Ja*	<4.0 *	<4.0 *	9.0 Ja*
MISC									
Total Settleable Solids	ml/L	-	0.10 *	<0.10 *	0.20 H*	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Total Suspended Solids	mg/L	-	12 H-1*	3.0 H-1, J*	130	54 H-1*	300 H-1*	17 H-1*	11 H-1*
Turbidity	NTU	-	22 *	7.1 *	180 H*	170 *	120 *	16 *	1.1 *
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.044 *	0.037 *	NR *	NR *	0.152 *	0.126 *	0.662 *
pH (Field)	pH units	6.5 - 8.5	7.23 *	7.41 *	NR *	NR *	7.45 *	7.36 *	7.36 *
Temperature	°C	30	13 *	9.5 *	NR *	NR *	13 *	13.1 *	11.6
Turbidity (Field)	NTU	-	93 *	93 *	NR *	NR *	18 *	14 *	1 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.054	0.054	0.019	0.052	0.053	0.053	0.014
Intensity (Ave) - Rain Event	in/hr	-	0.054	0.054	0.054	0.054	0.054	0.054	0.014
Intensity (Max) - Pre-Sampling	in/hr	-	0.37	0.37	0.06	0.37	0.37	0.37	0.12
Intensity (Max) - Rain Event	in/hr	-	0.37	0.37	0.37	0.37	0.37	0.37	0.12
Total - Pre-Sampling	in	-	7.22	7.22	0.62	6.6	6.84	6.95	0.38
Total - Rain Event	in	-	7.22	7.22	7.22	7.22	7.22	7.22	0.38

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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ANALYTE	UNITS	Object Name	BGBMP0006	A2SW0006	BGBMP0007	LXSW0001	EVBMP0002	ILBMP0003	LXBMP0003
		Sample Name	BGBMP0006S001	A2SW0006S007	BGBMP0007S001	LXSW0001S006	EVBMP0002S002	ILBMP0003S002	LXBMP0003S002
		Sample Date	1/3/2011	1/3/2011	1/3/2011	1/3/2011	1/3/2011	1/3/2011	1/3/2011
		Sample Type	BMP	Perf Mon	BMP	Perf Mon	BMP	BMP	BMP
		Location	Upgradient of CM-1	Upgradient of CM-1	Upgradient of CM-3	Upgradient of CM-3	ELV Helipad Spillway	IEL Tributary Drainage	East LOX Unpaved Road
		Rain Event	January 2-3, 2011	January 2-3, 2011	January 2-3, 2011				
NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	see A2SW0006S007	6.10E-10	see LXSW0001S006	ND	5.61E-08	ND	ND
INORGANICS									
Aluminum	mg/L	-	0.063 *	--	0.68 *	--	0.87 *	0.11 *	1.2 *
Aluminum, dissolved	mg/L	-	<0.040 *	--	0.051 *	--	<0.040 *	0.068 *	<0.040 *
Antimony	µg/L	6.0	<0.30 *	--	<0.30 *	--	0.93 Ja*	0.35 Ja*	<0.30 *
Antimony, dissolved	µg/L	-	<0.30 *	--	<0.30 *	--	0.86 Ja*	0.38 Ja*	<0.30 *
Arsenic	µg/L	-	<7.0 *	--	<7.0 *	--	<7.0 *	<7.0 *	<7.0 *
Arsenic, dissolved	µg/L	-	<7.0 *	--	<7.0 *	--	<7.0 *	<7.0 *	<7.0 *
Barium	mg/L	-	0.023 *	--	0.015 *	--	0.018 *	0.017 *	0.026 *
Barium, dissolved	mg/L	-	0.023 *	--	0.0083 Ja*	--	0.0086 Ja*	0.015 *	0.013 *
Beryllium	µg/L	-	<0.90 *	--	<0.90 *	--	<0.90 *	<0.90 *	<0.90 *
Beryllium, dissolved	µg/L	-	<0.90 *	--	<0.90 *	--	<0.90 *	<0.90 *	<0.90 *
Boron	mg/L	1.0	0.057 *	--	0.052 *	--	<0.020 *	0.20 *	0.040 Ja*
Boron, dissolved	mg/L	-	0.057 B*	--	0.053 B*	--	<0.020 *	0.20 B*	0.039 B, Ja*
Cadmium	µg/L	4.0	<0.10 *	--	see LXSW0001S006	<0.10 *	0.14 Ja*	<0.10 *	<0.10 *
Cadmium, dissolved	µg/L	-	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *
Chromium	µg/L	-	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *	2.0 Ja*
Chromium, dissolved	µg/L	-	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *
Cobalt	µg/L	-	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *
Cobalt, dissolved	µg/L	-	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *
Copper	µg/L	14	2.9 *	--	see LXSW0001S006	2.2 *	5.2 *	3.1 *	2.9 *
Copper, dissolved	µg/L	-	2.8 *	--	1.3	--	3.5 *	3.0 *	2.2 *
Iron	mg/L	-	0.11 B*	--	0.85 B*	--	1.1 B*	0.16 B*	1.6 B*
Iron, dissolved	mg/L	-	0.032 Ja*	--	0.049 *	--	0.031 Ja*	0.11 *	0.053 *
Lead	µg/L	5.2	see A2SW0006S007	2.0 *	see LXSW0001S006	1.1 *	4.2 *	0.20 Ja*	0.72 Ja*
Lead, dissolved	µg/L	-	<0.20 *	--	<0.20 *	--	0.23 Ja*	<0.20 *	<0.20 *
Manganese	µg/L	-	<7.0 *	--	20 *	--	22 *	<7.0 *	27 *
Manganese, dissolved	µg/L	-	<7.0 *	--	<7.0 *	--	<7.0 *	<7.0 *	8.8 Ja*
Mercury	µg/L	0.13	<0.10 *	--	see LXSW0001S006	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Mercury, dissolved	µg/L	-	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *
Nickel	µg/L	100	2.4 Ja*	--	2.4 Ja*	--	<2.0 *	4.0 Ja*	3.1 Ja*
Nickel, dissolved	µg/L	-	2.6 Ja*	--	<2.0 *	--	<2.0 *	4.0 Ja*	<2.0 *
Selenium	µg/L	-	<0.50 *	--	<0.50 *	--	<0.50 *	<0.50 *	<0.50 *
Selenium, dissolved	µg/L	-	<0.50 *	--	<0.50 *	--	<0.50 *	<0.50 *	<0.50 *
Silver	µg/L	-	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *
Silver, dissolved	µg/L	-	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *
Thallium	µg/L	2.0	<0.20 *	--	<0.20 *	--	<0.20 *	<0.20 *	<0.20 *
Thallium, dissolved	µg/L	-	<0.20 *	--	<0.20 *	--	<0.20 *	<0.20 *	<0.20 *
Vanadium	µg/L	-	<3.0 *	--	<3.0 *	--	<3.0 *	<3.0 *	3.7 Ja*
Vanadium, dissolved	µg/L	-	<3.0 *	--	<3.0 *	--	<3.0 *	<3.0 *	<3.0 *
Zinc	µg/L	159	<4.0 *	--	6.6 Ja*	--	91 *	<4.0 *	4.5 Ja*

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	BGBMP0006	A2SW0006	BGBMP0007	LXSW0001	EVBMP0002	ILBMP0003	LXBMP0003
		Sample Name	BGBMP0006S001	A2SW0006S007	BGBMP0007S001	LXSW0001S006	EVBMP0002S002	ILBMP0003S002	LXBMP0003S002
		Sample Date	1/3/2011	1/3/2011	1/3/2011	1/3/2011	1/3/2011	1/3/2011	1/3/2011
		Sample Type	BMP	Perf Mon	BMP	Perf Mon	BMP	BMP	BMP
		Location	Upgradient of CM-1	Upgradient of CM-1	Upgradient of CM-3	Upgradient of CM-3	ELV Helipad Spillway	IEL Tributary Drainage	East LOX Unpaved Road
		Rain Event	January 2-3, 2011	January 2-3, 2011	January 2-3, 2011				
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Zinc, Dissolved	µg/L	-	<4.0 *	--	<4.0 *	--	59 *	<4.0 *	<4.0 *
MISC									
Total Settleable Solids	ml/L	-	0.30 *	--	<0.10 *	--	<0.10 *	0.10 *	0.10 *
Total Suspended Solids	mg/L	-	see A2SW0006S007	18 *	see LXSW0001S006	7.0 Ja*	14 H-1*	4.0 H-1, J*	140 H-1*
Turbidity	NTU	-	2.4 *	--	2.8 *	--	14 *	1.7 *	38 *
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	see A2SW0006S007	0.192 *	see LXSW0001S006	0.101 *	0.063 *	0.226 *	0.127 *
pH (Field)	pH units	6.5 - 8.5	see A2SW0006S007	7.04 *	see LXSW0001S006	7.37 *	6.89 *	7.48 *	7.39 *
Temperature	°C	30	see A2SW0006S007	8.3 *	see LXSW0001S006	9.9 *	7.2	10.7 *	9.4 *
Turbidity (Field)	NTU	-	see A2SW0006S007	7 *	see LXSW0001S006	94 *	84 *	133 *	72 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.016	0.016	0.015	0.015	0.017	0.014	0.016
Intensity (Ave) - Rain Event	in/hr	-	0.014	0.014	0.014	0.014	0.014	0.014	0.014
Intensity (Max) - Pre-Sampling	in/hr	-	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Intensity (Max) - Rain Event	in/hr	-	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Total - Pre-Sampling	in	-	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Total - Rain Event	in	-	0.38	0.38	0.38	0.38	0.38	0.38	0.38

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	A1BMP0001	B1BMP0001	B1SW0010	B1BMP0002	B1BMP0002	BGBMP0001	A2SW0007
		Sample Name	A1BMP0001S003	B1BMP0001S001	B1SW0010S001	B1BMP0002S002	B1BMP0002S003	BGBMP0001S002	A2SW0007S002
		Sample Date	2/19/2011	2/16/2011	2/16/2011	2/19/2011	2/26/2011	2/26/2011	2/26/2011
		Sample Type	BMP	BMP	Perf Mon	BMP	BMP	BMP	Perf Mon
		Location	A1LF Tributary Drainage	B-1 Culvert Inlet	B-1 Culvert Inlet	Parking Lot Culvert	Parking Lot Culvert	Upgradient of CM-1	Upgradient of CM-1
		Rain Event	February 15-20, 2011	February 15-20, 2011	February 15-20, 2011	February 15-20, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	1.20E-10	see B1SW0010S001	2.93E-07 *	1.50E-10	5.40E-10	see A2SW0007S002	ND
INORGANICS									
Aluminum	mg/L	-	0.052	12	--	0.74	1.8 *	0.16 *	--
Aluminum, dissolved	mg/L	-	<0.040	0.35	--	<0.040	0.11 *	<0.040 *	--
Antimony	µg/L	6.0	1.7 J*	<1.5 RL1*	--	<0.30	0.32 B, J*	0.32 B, J*	--
Antimony, dissolved	µg/L	-	1.5 J*	<0.60 RL1*	--	<0.30	<0.30 *	<0.30 *	--
Arsenic	µg/L	-	<7.0	<7.0	--	<7.0	<7.0 *	<7.0 *	--
Arsenic, dissolved	µg/L	-	<7.0	<7.0	--	<7.0	<7.0 *	<7.0 *	--
Barium	mg/L	-	0.046	0.15	--	0.015	0.021 *	0.021 *	--
Barium, dissolved	mg/L	-	0.068	0.057	--	0.036	0.0068 J*	0.019 *	--
Beryllium	µg/L	-	<0.90	<0.90	--	<0.90	<0.90 *	<0.90 *	--
Beryllium, dissolved	µg/L	-	<0.90	<0.90	--	<0.90	<0.90 *	<0.90 *	--
Boron	mg/L	1.0	0.096	0.077	--	<0.020	<0.020 *	0.051 *	--
Boron, dissolved	mg/L	-	0.11	0.067	--	0.033 J*	<0.020 *	0.050 *	--
Cadmium	µg/L	4.0	0.46 J*	see B1SW0010S001	0.77 RL1, J*	<0.10	0.19 B, J*	0.16 B, J*	--
Cadmium, dissolved	µg/L	-	0.39 J*	0.24 RL1, J*	--	<0.10	<0.10 *	<0.10 *	--
Chromium	µg/L	-	<2.0	19	--	<2.0	2.1 J*	<2.0 *	--
Chromium, dissolved	µg/L	-	<2.0	<2.0	--	<2.0	<2.0 *	<2.0 *	--
Cobalt	µg/L	-	<2.0	8.0 J*	--	<2.0	<2.0 *	<2.0 *	--
Cobalt, dissolved	µg/L	-	<2.0	3.9 J*	--	<2.0	<2.0 *	<2.0 *	--
Copper	µg/L	14	4.2	see B1SW0010S001	27 *	2.2	3.2 *	3.6 *	--
Copper, dissolved	µg/L	-	4.2 B*	15 B*	--	1.2 B, J*	<0.50 *	1.4 J*	--
Iron	mg/L	-	0.062	17	--	0.82	2.1 *	0.26 *	--
Iron, dissolved	mg/L	-	0.015 J*	0.19	--	0.039 J*	0.13 B*	0.051 B*	--
Lead	µg/L	5.2	<0.20	see B1SW0010S001	11 *	0.94 J*	1.8 *	see A2SW0007S002	0.80 Ja*
Lead, dissolved	µg/L	-	<0.20	0.50 RL1, J*	--	<0.20	<0.20 *	<0.20 *	--
Manganese	µg/L	-	<7.0	470	--	83	74 *	9.1 J*	--
Manganese, dissolved	µg/L	-	<7.0	220	--	48	39 *	<7.0 *	--
Mercury	µg/L	0.13	--	see B1SW0010S001	<0.10 *	0.16 J*	<0.10 *	<0.10 *	--
Mercury, dissolved	µg/L	-	<0.10	<0.10	--	<0.10	<0.10 *	<0.10 *	--
Nickel	µg/L	100	<2.0	13	--	<2.0	<2.0 *	2.1 J*	--
Nickel, dissolved	µg/L	-	<2.0	4.8 J*	--	<2.0	<2.0 *	<2.0 *	--
Selenium	µg/L	-	<0.50	<2.5 RL1*	--	<0.50	<0.50 *	<0.50 *	--
Selenium, dissolved	µg/L	-	<0.50	<1.0 RL1*	--	<0.50	<0.50 *	<0.50 *	--
Silver	µg/L	-	<0.10	<0.50 RL1*	--	<0.10	<0.10 *	<0.10 *	--
Silver, dissolved	µg/L	-	<0.10	<0.20 RL1*	--	<0.10	<0.10 *	<0.10 *	--
Thallium	µg/L	2.0	<0.20	<1.0 RL1*	--	<0.20	<0.20 *	<0.20 *	--
Thallium, dissolved	µg/L	-	<0.20	<0.40 RL1*	--	<0.20	<0.20 *	<0.20 *	--
Vanadium	µg/L	-	<3.0	35	--	<3.0	4.6 J*	<3.0 *	--
Vanadium, dissolved	µg/L	-	<3.0	3.0 J*	--	<3.0	<3.0 *	<3.0 *	--
Zinc	µg/L	159	9.3 J*	110	--	6.9 J*	16 J*	4.0 J*	--

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	A1BMP0001	B1BMP0001	B1SW0010	B1BMP0002	B1BMP0002	BGBMP0001	A2SW0007
		Sample Name	A1BMP0001S003	B1BMP0001S001	B1SW0010S001	B1BMP0002S002	B1BMP0002S003	BGBMP0001S002	A2SW0007S002
		Sample Date	2/19/2011	2/16/2011	2/16/2011	2/19/2011	2/26/2011	2/26/2011	2/26/2011
		Sample Type	BMP	BMP	Perf Mon	BMP	BMP	BMP	Perf Mon
		Location	A1LF Tributary Drainage	B-1 Culvert Inlet	B-1 Culvert Inlet	Parking Lot Culvert	Parking Lot Culvert	Upgradient of CM-1	Upgradient of CM-1
		Rain Event	February 15-20, 2011	February 15-20, 2011	February 15-20, 2011	February 15-20, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Zinc, Dissolved	µg/L	-	6.3 J*	38 RL1, J*	--	<4.0	<4.0 *	<4.0 *	--
MISC									
Total Settleable Solids	ml/L	-	--	--	--	--	--	--	--
Total Suspended Solids	mg/L	-	7.0 J*	see B1SW0010S001	650 *	26	33 *	see A2SW0007S002	7.0 Ja*
Turbidity	NTU	-	0.96 J*	150	--	28	58 *	3.6 *	--
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.442 *	see B1SW0010S001	0.367 *	0.442 *	0 *	see A2SW0007S002	0.144 *
pH (Field)	pH units	6.5 - 8.5	7.44 *	see B1SW0010S001	6.18 *	7.44 *	8.68 *	see A2SW0007S002	7.14 *
Temperature	°C	30	11.5 *	see B1SW0010S001	15.09 *	11.5 *	9.21 *	see A2SW0007S002	8.2 *
Turbidity (Field)	NTU	-	106 *	see B1SW0010S001	> limit *	106 *	NR *	see A2SW0007S002	10 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.019	0.016	0.016	0.019	0.06	0.058	0.058
Intensity (Ave) - Rain Event	in/hr	-	0.019	0.019	0.019	0.019	0.048	0.048	0.048
Intensity (Max) - Pre-Sampling	in/hr	-	0.45	0.11	0.11	0.45	0.26	0.26	0.26
Intensity (Max) - Rain Event	in/hr	-	0.45	0.45	0.45	0.45	0.26	0.26	0.26
Total - Pre-Sampling	in	-	2.04	0.58	0.58	2.03	1.5	1.5	1.5
Total - Rain Event	in	-	2.33	2.33	2.33	2.33	1.5	1.5	1.5

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	BGBMP0007	LXSW0001	EVBMP0002	LXBMP0003	A1BMP0001	A2BMP0002	B1BMP0001
		Sample Name	BGBMP0007S002	LXSW0001S007	EVBMP0002S004	LXBMP0003S003	A1BMP0001S004	A2BMP0002S001	B1BMP0001S002
		Sample Date	2/26/2011	2/26/2011	2/26/2011	2/26/2011	3/21/2011	3/21/2011	3/21/2011
		Sample Type	BMP	Perf Mon	BMP	BMP	BMP	BMP	BMP
		Location	Upgradient of CM-3	Upgradient of CM-3	ELV Helipad Spillway	East LOX Unpaved Road	A1LF Tributary Drainage	A2LF Unpaved Road	B-1 Culvert Inlet
		Rain Event	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	see LXSW0001S007	ND	4.57E-08	ND	4.50E-10	ND	see B1SW0010S002
INORGANICS									
Aluminum	mg/L	-	0.22 *	--	0.46 *	0.39 *	0.12 *	0.18 *	7.3 *
Aluminum, dissolved	mg/L	-	0.11 *	--	<0.040 *	0.12 *	<0.040 *	<0.040 *	0.70 *
Antimony	µg/L	6.0	<0.30 *	--	0.71 B, J*	<0.30 *	1.5 Ja*	<0.30 *	<0.30 *
Antimony, dissolved	µg/L	-	<0.30 *	--	0.66 J*	<0.30 *	1.6 Ja*	<0.30 *	<0.30 *
Arsenic	µg/L	-	<7.0 *	--	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *
Arsenic, dissolved	µg/L	-	<7.0 *	--	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *
Barium	mg/L	-	0.0089 J*	--	0.012 *	0.015 *	0.042 *	0.038 *	0.064 *
Barium, dissolved	mg/L	-	0.0082 J*	--	0.0079 J*	0.012 *	0.045 *	0.042 *	0.016 *
Beryllium	µg/L	-	<0.90 *	--	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *
Beryllium, dissolved	µg/L	-	<0.90 *	--	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *
Boron	mg/L	1.0	0.044 J*	--	<0.020 *	0.026 J*	0.10 *	0.12 *	0.049 Ja*
Boron, dissolved	mg/L	-	0.044 J*	--	<0.020 *	0.027 J*	0.093 *	0.12 *	0.043 Ja*
Cadmium	µg/L	4.0	see LXSW0001S007	<0.10 *	0.22 B, J*	0.12 B, J*	0.51 Ja*	<0.10 *	see B1SW0010S002
Cadmium, dissolved	µg/L	-	<0.10 *	--	<0.10 *	<0.10 *	0.46 Ja*	<0.10 *	<0.10 *
Chromium	µg/L	-	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *	<2.0 *	8.0 *
Chromium, dissolved	µg/L	-	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Cobalt	µg/L	-	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *	<2.0 *	3.0 Ja*
Cobalt, dissolved	µg/L	-	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Copper	µg/L	14	see LXSW0001S007	1.5 B, Ja*	4.3 *	10 *	4.0 *	2.4 *	see B1SW0010S002
Copper, dissolved	µg/L	-	<0.50 *	--	2.7 *	1.1 J*	3.7 *	2.0 *	2.9 *
Iron	mg/L	-	0.24 *	--	0.61 *	0.48 *	0.14 *	0.29 *	8.7 *
Iron, dissolved	mg/L	-	0.13 B*	--	0.051 B*	0.13 B*	0.015 Ja*	0.022 Ja*	0.49 *
Lead	µg/L	5.2	see LXSW0001S007	0.24 Ja*	2.4 *	0.25 J*	0.28 Ja*	0.29 Ja*	see B1SW0010S002
Lead, dissolved	µg/L	-	<0.20 *	--	0.25 J*	<0.20 *	<0.20 *	<0.20 *	0.29 Ja*
Manganese	µg/L	-	<7.0 *	--	15 J*	<7.0 *	<7.0 *	<7.0 *	200 *
Manganese, dissolved	µg/L	-	<7.0 *	--	<7.0 *	<7.0 *	<7.0 *	<7.0 *	59 *
Mercury	µg/L	0.13	see LXSW0001S007	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	see B1SW0010S002
Mercury, dissolved	µg/L	-	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Nickel	µg/L	100	<2.0 *	--	<2.0 *	<2.0 *	<2.0 *	<2.0 *	6.4 Ja*
Nickel, dissolved	µg/L	-	<2.0 *	--	<2.0 *	<2.0 *	2.1 Ja*	2.5 Ja*	3.6 Ja*
Selenium	µg/L	-	<0.50 *	--	<0.50 *	<0.50 *	<0.50 *	0.81 Ja*	<0.50 *
Selenium, dissolved	µg/L	-	<0.50 *	--	<0.50 *	<0.50 *	<0.50 *	1.0 Ja*	<0.50 *
Silver	µg/L	-	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Silver, dissolved	µg/L	-	<0.10 *	--	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Thallium	µg/L	2.0	<0.20 *	--	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *
Thallium, dissolved	µg/L	-	<0.20 *	--	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *
Vanadium	µg/L	-	<3.0 *	--	<3.0 *	<3.0 *	<3.0 *	<3.0 *	16 *
Vanadium, dissolved	µg/L	-	<3.0 *	--	<3.0 *	<3.0 *	<3.0 *	<3.0 *	<3.0 *
Zinc	µg/L	159	10 J*	--	80 *	7.4 J*	11 Ja*	<4.0 *	56 *

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	BGBMP0007	LXSW0001	EVBMP0002	LXBMP0003	A1BMP0001	A2BMP0002	B1BMP0001
		Sample Name	BGBMP0007S002	LXSW0001S007	EVBMP0002S004	LXBMP0003S003	A1BMP0001S004	A2BMP0002S001	B1BMP0001S002
		Sample Date	2/26/2011	2/26/2011	2/26/2011	2/26/2011	3/21/2011	3/21/2011	3/21/2011
		Sample Type	BMP	Perf Mon	BMP	BMP	BMP	BMP	BMP
		Location	Upgradient of CM-3	Upgradient of CM-3	ELV Helipad Spillway	East LOX Unpaved Road	A1LF Tributary Drainage	A2LF Unpaved Road	B-1 Culvert Inlet
		Rain Event	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011	February 25-26, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Zinc, Dissolved	µg/L	-	<4.0 *	--	56 *	<4.0 *	9.7 Ja*	<4.0 *	20 *
MISC									
Total Settleable Solids	ml/L	-	--	--	--	--	--	--	--
Total Suspended Solids	mg/L	-	see LXSW0001S007	3.0 Ja*	5.0 J*	3.0 J*	1.0 Ja*	3.0 Ja*	see B1SW0010S002
Turbidity	NTU	-	3.8 *	--	20 *	7.4 *	2.7 *	2.1 *	280 *
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	see LXSW0001S007	0.09 *	0.042 *	0.091 *	33 *	0.4 *	see B1SW0010S002
pH (Field)	pH units	6.5 - 8.5	see LXSW0001S007	6.65 *	7.46 *	6.27 *	6.6 *	7.32 *	see B1SW0010S002
Temperature	°C	30	see LXSW0001S007	9.96 *	10.3 *	11.18 *	13.1 *	11.9 *	see B1SW0010S002
Turbidity (Field)	NTU	-	see LXSW0001S007	1.96 *	10 *	17.2 *	3 *	10 *	see B1SW0010S002
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.057	0.057	0.057	0.06	0.076	0.075	0.082
Intensity (Ave) - Rain Event	in/hr	-	0.048	0.048	0.048	0.048	0.013	0.013	0.013
Intensity (Max) - Pre-Sampling	in/hr	-	0.26	0.26	0.26	0.26	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	0.26	0.26	0.26	0.26	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	1.5	1.5	1.5	1.5	4.81	4.81	4.81
Total - Rain Event	in	-	1.5	1.5	1.5	1.5	6.00	6.00	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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ANALYTE	UNITS	Object Name	B1SW0010	B1BMP0002	BGBMP0001	A2SW0007	BGBMP0002	LXSW0003	BGBMP0003	BGBMP0004
		Sample Name	B1SW0010S002	B1BMP0002S004	BGBMP0001S003	A2SW0007S003	BGBMP0002S002	LXSW0003S001	BGBMP0003S001	BGBMP0004S001
		Sample Date	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011
		Sample Type	Perf Mon	BMP	BMP	Perf Mon	BMP	Perf Mon	BMP	BMP
		Location	B-1 Culvert Inlet	Parking Lot Culvert	Upgradient of CM-1	Upgradient of CM-1	Upgradient of CM-3	Upgradient of CM-3	Sage Ranch at LOX	Sage Ranch Trail
		Rain Event	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
		NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS										
TCDD TEQ_NoDNQ	µg/L	2.80E-08	1.20E-10	5.20E-10	see A2SW0007S003	ND	see LXSW0003S001	ND	ND	1.00E-10
INORGANICS										
Aluminum	mg/L	-	--	1.6 *	0.34 *	--	0.98 *	--	0.61 *	0.75 *
Aluminum, dissolved	mg/L	-	--	0.65 *	0.059 *	--	0.44 *	--	0.37 *	0.41 *
Antimony	µg/L	6.0	--	<0.30 *	<0.30 *	--	<0.30 *	--	<0.30 *	<0.30 *
Antimony, dissolved	µg/L	-	--	0.34 Ja*	<0.30 *	--	<0.30 *	--	<0.30 *	<0.30 *
Arsenic	µg/L	-	--	<7.0 *	<7.0 *	--	<7.0 *	--	<7.0 *	<7.0 *
Arsenic, dissolved	µg/L	-	--	<7.0 *	<7.0 *	--	<7.0 *	--	<7.0 *	<7.0 *
Barium	mg/L	-	--	0.028 *	0.020 *	--	0.015 *	--	0.020 *	0.020 *
Barium, dissolved	mg/L	-	--	0.025 *	0.020 *	--	0.0098 Ja*	--	0.019 *	0.019 *
Beryllium	µg/L	-	--	<0.90 *	<0.90 *	--	<0.90 *	--	<0.90 *	<0.90 *
Beryllium, dissolved	µg/L	-	--	<0.90 *	<0.90 *	--	<0.90 *	--	<0.90 *	<0.90 *
Boron	mg/L	1.0	--	0.044 Ja*	0.053 *	--	0.052 *	--	0.049 Ja*	0.048 Ja*
Boron, dissolved	mg/L	-	--	0.050 *	0.053 *	--	0.051 *	--	0.049 Ja*	0.050 *
Cadmium	µg/L	4.0	0.17 J	0.14 Ja*	<0.10 *	--	see LXSW0003S001	<0.10 U	<0.10 *	<0.10 *
Cadmium, dissolved	µg/L	-	--	<0.10 *	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *
Chromium	µg/L	-	--	<2.0 *	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *
Chromium, dissolved	µg/L	-	--	<2.0 *	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *
Cobalt	µg/L	-	--	<2.0 *	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *
Cobalt, dissolved	µg/L	-	--	<2.0 *	<2.0 *	--	<2.0 *	--	<2.0 *	<2.0 *
Copper	µg/L	14	7.0	3.8 *	2.3 *	--	see LXSW0003S001	1.6 J	2.7 *	2.4 *
Copper, dissolved	µg/L	-	--	2.9 *	1.6 Ja*	--	0.76 Ja*	--	2.1 *	1.6 Ja*
Iron	mg/L	-	--	1.8 *	0.43 *	--	1.0 *	--	0.66 *	0.84 *
Iron, dissolved	mg/L	-	--	0.48 *	0.059 *	--	0.29 *	--	0.31 *	0.37 *
Lead	µg/L	5.2	5.9 J	2.8 *	see A2SW0007S003	0.53 J	see LXSW0003S001	1.4 J	0.69 Ja*	0.91 Ja*
Lead, dissolved	µg/L	-	--	0.57 Ja*	<0.20 *	--	<0.20 *	--	0.22 Ja*	0.25 Ja*
Manganese	µg/L	-	--	34 *	8.7 Ja*	--	17 Ja*	--	11 Ja*	15 Ja*
Manganese, dissolved	µg/L	-	--	11 Ja*	<7.0 *	--	<7.0 *	--	<7.0 *	<7.0 *
Mercury	µg/L	0.13	<0.10 U	<0.10 *	<0.10 *	--	see LXSW0003S001	<0.10 U	<0.10 *	<0.10 *
Mercury, dissolved	µg/L	-	--	<0.10 *	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *
Nickel	µg/L	100	--	2.2 Ja*	<2.0 *	--	<2.0 *	--	<2.0 *	2.0 Ja*
Nickel, dissolved	µg/L	-	--	2.3 Ja*	2.1 Ja*	--	2.2 Ja*	--	2.7 Ja*	2.7 Ja*
Selenium	µg/L	-	--	<0.50 *	<0.50 *	--	<0.50 *	--	<0.50 *	<0.50 *
Selenium, dissolved	µg/L	-	--	<0.50 *	<0.50 *	--	<0.50 *	--	<0.50 *	<0.50 *
Silver	µg/L	-	--	<0.10 *	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *
Silver, dissolved	µg/L	-	--	<0.10 *	<0.10 *	--	<0.10 *	--	<0.10 *	<0.10 *
Thallium	µg/L	2.0	--	<0.20 *	<0.20 *	--	<0.20 *	--	<0.20 *	<0.20 *
Thallium, dissolved	µg/L	-	--	<0.20 *	<0.20 *	--	<0.20 *	--	<0.20 *	<0.20 *
Vanadium	µg/L	-	--	5.0 Ja*	<3.0 *	--	3.5 Ja*	--	<3.0 *	<3.0 *
Vanadium, dissolved	µg/L	-	--	<3.0 *	<3.0 *	--	<3.0 *	--	<3.0 *	<3.0 *
Zinc	µg/L	159	--	68 *	<4.0 *	--	4.2 Ja*	--	<4.0 *	<4.0 *

Table 3-3
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		Object Name	B1SW0010	B1BMP0002	BGBMP0001	A2SW0007	BGBMP0002	LXSW0003	BGBMP0003	BGBMP0004
		Sample Name	B1SW0010S002	B1BMP0002S004	BGBMP0001S003	A2SW0007S003	BGBMP0002S002	LXSW0003S001	BGBMP0003S001	BGBMP0004S001
		Sample Date	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/21/2011
		Sample Type	Perf Mon	BMP	BMP	Perf Mon	BMP	Perf Mon	BMP	BMP
		Location	B-1 Culvert Inlet	Parking Lot Culvert	Upgradient of CM-1	Upgradient of CM-1	Upgradient of CM-3	Upgradient of CM-3	Sage Ranch at LOX	Sage Ranch Trail
		Rain Event	March 18-27, 2011							
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT							
Zinc, Dissolved	µg/L	-	--	51 *	<4.0 *	--	<4.0 *	--	<4.0 *	<4.0 *
MISC										
Total Settleable Solids	ml/L	-	--	--	--	--	--	--	--	--
Total Suspended Solids	mg/L	-	180	19 *	see A2SW0007S003	8.0 J	see LXSW0003S001	22	5.0 Ja*	17 *
Turbidity	NTU	-	200 J	37 *	3.8 *	7.0 J	18 *	19 J	15 *	14 *
FIELD MEASUREMENTS										
Conductivity (Field)	mS	-	0.113 *	0.162 *	see A2SW0007S003	39 *	see LXSW0003S001	9 *	9 *	11 *
pH (Field)	pH units	6.5 - 8.5	6.43 *	6.51 *	see A2SW0007S003	6.1 *	see LXSW0003S001	6.2 *	6.1 *	5.9 *
Temperature	°C	30	10.5 *	11 *	see A2SW0007S003	10.3 *	see LXSW0003S001	10.4 *	10.6 *	10.8 *
Turbidity (Field)	NTU	-	20 *	22 *	see A2SW0007S003	10 *	see LXSW0003S001	24 *	22 *	24 *
RAINFALL MEASUREMENTS †										
Intensity (Ave) - Pre-Sampling	in/hr	-	0.082	0.083	0.082	0.082	0.08	0.08	0.083	0.082
Intensity (Ave) - Rain Event	in/hr	-	0.03	0.013	0.013	0.03	0.013	0.03	0.013	0.013
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)							
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)							
Total - Pre-Sampling	in	-	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81
Total - Rain Event	in	-	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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ANALYTE	UNITS	Object Name	EVBMP0002	ILBMP0003	LXBMP0002	LXBMP0003	A1BMP0001	B1BMP0001	B1BMP0002
		Sample Name	EVBMP0002S005	ILBMP0003S003	LXBMP0002S002	LXBMP0003S004	A1BMP0001S005	B1BMP0001S003	B1BMP0002S005
		Sample Date	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/25/2011	3/25/2011	3/25/2011
		Sample Type	BMP	BMP	BMP	BMP	BMP	BMP	BMP
		Location	ELV Helipad Spillway	IEL Tributary Drainage	LOX Unpaved Road	East LOX Unpaved Road	A1LF Tributary Drainage	B-1 Culvert Inlet	Parking Lot Culvert
		Rain Event	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	7.15E-08	ND	4.53E-08	ND	1.60E-10	4.83E-08	1.50E-10
INORGANICS									
Aluminum	mg/L	-	0.45 M1*	1.1 *	0.58 *	4.6 *	0.49 *	16 *	4.9 *
Aluminum, dissolved	mg/L	-	0.17 *	1.2 *	0.32 *	0.44 *	<0.040 *	0.84 *	0.35 *
Antimony	µg/L	6.0	0.50 Ja*	0.48 Ja*	0.35 Ja*	<0.30 *	1.5 Ja*	0.43 Ja*	<0.30 *
Antimony, dissolved	µg/L	-	0.47 Ja*	0.53 Ja*	0.41 Ja*	<0.30 *	1.6 Ja*	<0.60 *	<0.30 *
Arsenic	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	7.1 Ja*
Arsenic, dissolved	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *
Barium	mg/L	-	0.014 *	0.017 *	0.021 *	0.058 *	0.036 *	0.12 *	0.045 *
Barium, dissolved	mg/L	-	0.012 *	0.017 *	0.020 *	0.016 *	0.035 *	0.023 *	0.010 *
Beryllium	µg/L	-	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 *	1.2 Ja*	<0.90 C*
Beryllium, dissolved	µg/L	-	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 C*	<0.90 C*	<0.90 C*
Boron	mg/L	1.0	0.020 Ja*	0.17 *	0.062 *	0.051 *	0.068 *	0.046 Ja*	0.028 Ja*
Boron, dissolved	mg/L	-	<0.020 *	0.17 *	0.061 *	0.048 Ja*	0.074 *	0.048 Ja*	0.021 Ja*
Cadmium	µg/L	4.0	0.17 Ja*	<0.10 *	<0.10 *	<0.10 *	0.48 Ja*	0.54 Ja*	<0.10 *
Cadmium, dissolved	µg/L	-	0.11 Ja*	<0.10 *	<0.10 *	<0.10 *	0.60 Ja*	<0.20 *	<0.10 *
Chromium	µg/L	-	<2.0 *	<2.0 *	<2.0 *	7.2 *	<2.0 *	20 *	6.4 *
Chromium, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	2.9 Ja*	<2.0 *	2.5 Ja*	<2.0 *
Cobalt	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	6.7 Ja*	<2.0 *
Cobalt, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Copper	µg/L	14	4.9 *	3.9 *	5.3 *	4.8 *	4.6 *	16 *	4.5 *
Copper, dissolved	µg/L	-	3.7 *	3.5 *	4.6 *	2.2 *	3.2 *	2.6 Ja*	4.4 *
Iron	mg/L	-	0.50 *	1.2 *	0.68 *	5.9 *	0.49 *	17 *	5.7 *
Iron, dissolved	mg/L	-	0.15 *	0.88 *	0.29 *	0.38 *	0.049 *	0.83 *	0.34 *
Lead	µg/L	5.2	3.1 *	0.92 Ja*	0.74 Ja*	2.5 *	0.64 Ja*	15 *	3.2 *
Lead, dissolved	µg/L	-	0.92 Ja*	0.39 Ja*	0.29 Ja*	0.23 Ja*	<0.20 *	0.64 Ja*	0.51 Ja*
Manganese	µg/L	-	11 Ja*	9.6 Ja*	7.4 Ja*	91 *	7.3 Ja*	370 *	140 *
Manganese, dissolved	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	95 *	59 *
Mercury	µg/L	0.13	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Mercury, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Nickel	µg/L	100	<2.0 *	3.1 Ja*	<2.0 *	8.6 Ja*	2.4 Ja*	13 *	5.1 Ja*
Nickel, dissolved	µg/L	-	<2.0 *	4.0 Ja*	2.3 Ja*	3.7 Ja*	3.8 Ja*	5.3 Ja*	<2.0 *
Selenium	µg/L	-	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	0.75 Ja*	<0.50 *
Selenium, dissolved	µg/L	-	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<1.0 *	<0.50 *
Silver	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	0.11 Ja*	0.10 Ja*	<0.10 *
Silver, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	0.22 Ja*	<0.20 *	<0.10 *
Thallium	µg/L	2.0	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *	0.22 Ja*	<0.20 *
Thallium, dissolved	µg/L	-	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.40 *	<0.20 *
Vanadium	µg/L	-	<3.0 *	3.8 Ja*	3.5 Ja*	12 *	<3.0 *	32 *	11 *
Vanadium, dissolved	µg/L	-	<3.0 *	3.6 Ja*	<3.0 *	<3.0 *	<3.0 C*	<3.0 *	<3.0 C*
Zinc	µg/L	159	69 *	4.1 Ja*	<4.0 *	14 Ja*	23 *	90 *	19 Ja*

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	EVBMP0002	ILBMP0003	LXBMP0002	LXBMP0003	A1BMP0001	B1BMP0001	B1BMP0002
		Sample Name	EVBMP0002S005	ILBMP0003S003	LXBMP0002S002	LXBMP0003S004	A1BMP0001S005	B1BMP0001S003	B1BMP0002S005
		Sample Date	3/21/2011	3/21/2011	3/21/2011	3/21/2011	3/25/2011	3/25/2011	3/25/2011
		Sample Type	BMP	BMP	BMP	BMP	BMP	BMP	BMP
		Location	ELV Helipad Spillway	IEL Tributary Drainage	LOX Unpaved Road	East LOX Unpaved Road	A1LF Tributary Drainage	B-1 Culvert Inlet	Parking Lot Culvert
		Rain Event	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Zinc, Dissolved	µg/L	-	58 *	<4.0 *	<4.0 *	<4.0 *	17 Ja*	8.2 Ja*	4.4 Ja*
MISC									
Total Settleable Solids	ml/L	-	--	--	--	--	--	--	--
Total Suspended Solids	mg/L	-	2.0 Ja*	4.0 Ja*	11 *	230 *	12 *	270 *	81 *
Turbidity	NTU	-	10 *	14 *	14 *	200 *	11 *	480 *	110 *
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	17 *	15 *	14 *	10 *	0.297 *	0.163 *	0.165 *
pH (Field)	pH units	6.5 - 8.5	6.4 *	6.8 *	6 *	6.1 *	6.73 *	6.85 *	7.06 *
Temperature	°C	30	10.4 *	12.8 *	10.2 *	10.3 *	12.8 *	13.9 *	14.1 *
Turbidity (Field)	NTU	-	14 *	17 *	19 *	110 *	NR *	518 *	116 *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.081	0.075	0.084	0.084	0.038	0.038	0.038
Intensity (Ave) - Rain Event	in/hr	-	0.013	0.013	0.013	0.013	0.013	0.013	0.013
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)
Total - Pre-Sampling	in	-	4.81	4.81	4.81	4.81	5.92	5.92	5.92
Total - Rain Event	in	-	6.00	6.00	6.00	6.00	6.00	6.00	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	BGBMP0001	BGBMP0002	BGBMP0003	BGBMP0004	BGBMP0005	EVBMP0001	EVBMP0002
		Sample Name	BGBMP0001S004	BGBMP0002S003	BGBMP0003S002	BGBMP0004S002	BGBMP0005S001	EVBMP0001S002	EVBMP0002S006
		Sample Date	3/24/2011	3/24/2011	3/24/2011	3/24/2011	3/25/2011	3/24/2011	3/25/2011
		Sample Type	BMP	BMP	BMP	BMP	BMP	BMP	BMP
		Location	Upgradient of CM-1	Upgradient of CM-3	Sage Ranch at LOX	Sage Ranch Trail	North of B-1	Culvert at Helipad Rd	ELV Helipad Spillway
		Rain Event	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS									
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND	ND	ND	ND	ND	3.09E-08
INORGANICS									
Aluminum	mg/L	-	<0.040 *	0.35 *	0.22 *	0.083 *	0.48 *	<0.040 *	0.17 *
Aluminum, dissolved	mg/L	-	<0.040 *	0.22 *	0.073 *	<0.040 *	0.24 *	<0.040 *	<0.040 *
Antimony	µg/L	6.0	<0.30 *	<0.30 *	<0.30 *	<0.30 *	<0.30 *	0.48 J*	0.50 Ja*
Antimony, dissolved	µg/L	-	<0.30 *	<0.30 *	<0.30 *	<0.30 *	<0.30 *	0.46 J*	0.54 Ja*
Arsenic	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *
Arsenic, dissolved	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *
Barium	mg/L	-	0.021 *	0.0089 J*	0.016 *	0.016 *	0.025 *	0.034 *	0.012 *
Barium, dissolved	mg/L	-	0.020 *	0.0079 J*	0.015 *	0.015 *	0.020 *	0.032 *	0.011 *
Beryllium	µg/L	-	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 C*	<0.90 *	<0.90 C*
Beryllium, dissolved	µg/L	-	<0.90 *	<0.90 *	<0.90 *	<0.90 *	<0.90 C*	<0.90 *	<0.90 C*
Boron	mg/L	1.0	0.049 J*	0.048 J*	0.039 Ja*	0.038 Ja*	0.061 *	0.086 *	<0.020 *
Boron, dissolved	mg/L	-	0.045 J*	0.044 J*	0.039 Ja*	0.037 Ja*	0.056 *	0.077 *	<0.020 *
Cadmium	µg/L	4.0	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Cadmium, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Chromium	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Chromium, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Cobalt	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Cobalt, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Copper	µg/L	14	1.7 J*	1.0 J*	1.8 Ja*	1.3 Ja*	2.4 *	2.3 *	4.3 *
Copper, dissolved	µg/L	-	2.0 *	1.2 J*	2.2 *	1.8 Ja*	10 *	2.6 *	23 *
Iron	mg/L	-	0.046 *	0.25 *	0.24 *	0.14 *	0.56 *	0.033 J*	0.22 *
Iron, dissolved	mg/L	-	0.020 J*	0.16 *	0.087 *	0.062 *	0.23 *	<0.015 *	0.040 *
Lead	µg/L	5.2	<0.20 *	0.20 J*	<0.20 *	<0.20 *	0.84 Ja*	<0.20 *	1.2 *
Lead, dissolved	µg/L	-	<0.20 *	<0.20 *	<0.20 *	<0.20 *	1.5 *	<0.20 *	1.4 *
Manganese	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	13 Ja*	<7.0 *	<7.0 *
Manganese, dissolved	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *
Mercury	µg/L	0.13	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Mercury, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Nickel	µg/L	100	3.5 J*	<2.0 *	<2.0 *	<2.0 *	2.9 Ja*	<2.0 *	2.3 Ja*
Nickel, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	2.3 Ja*	<2.0 *	3.3 Ja*
Selenium	µg/L	-	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *
Selenium, dissolved	µg/L	-	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *
Silver	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Silver, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Thallium	µg/L	2.0	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *
Thallium, dissolved	µg/L	-	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *
Vanadium	µg/L	-	<3.0 *	<3.0 *	<3.0 *	<3.0 *	<3.0 C*	<3.0 *	<3.0 C*
Vanadium, dissolved	µg/L	-	<3.0 *	<3.0 *	<3.0 *	<3.0 *	<3.0 C*	<3.0 *	<3.0 C*
Zinc	µg/L	159	<4.0 *	<4.0 *	<4.0 *	<4.0 *	<4.0 *	<4.0 *	62 *

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	BGBMP0001	BGBMP0002	BGBMP0003	BGBMP0004	BGBMP0005	EVBMP0001	EVBMP0002
		Sample Name	BGBMP0001S004	BGBMP0002S003	BGBMP0003S002	BGBMP0004S002	BGBMP0005S001	EVBMP0001S002	EVBMP0002S006
		Sample Date	3/24/2011	3/24/2011	3/24/2011	3/24/2011	3/25/2011	3/24/2011	3/25/2011
		Sample Type	BMP	BMP	BMP	BMP	BMP	BMP	BMP
		Location	Upgradient of CM-1	Upgradient of CM-3	Sage Ranch at LOX	Sage Ranch Trail	North of B-1	Culvert at Helipad Rd	ELV Helipad Spillway
		Rain Event	March 18-27, 2011	March 18-27, 2011					
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Zinc, Dissolved	µg/L	-	<4.0 C*	<4.0 C*	<4.0 C*	<4.0 C*	6.3 Ja*	8.7 J*	64 *
MISC									
Total Settleable Solids	ml/L	-	--	--	--	--	--	--	--
Total Suspended Solids	mg/L	-	<1.0 *	5.0 J*	<1.0 *	4.0 Ja*	11 *	2.0 J*	10 *
Turbidity	NTU	-	0.59 J*	2.9 *	3.0 *	1.4 *	10 *	0.46 J*	5.2 *
FIELD MEASUREMENTS									
Conductivity (Field)	mS	-	0.25 *	0.106 *	0.108 *	0.144 *	0.104 *	0.45 *	0.078 *
pH (Field)	pH units	6.5 - 8.5	7.7 *	8.14 *	7.71 *	7.66 *	6.78 *	7.01 *	7.37 *
Temperature	°C	30	11.4 *	10.7 *	13.1 *	12.4 *	12.7 *	11.8 *	17.3 *
Turbidity (Field)	NTU	-	NR *	NR *	NR *	NR *	5 *	NR *	NR *
RAINFALL MEASUREMENTS †									
Intensity (Ave) - Pre-Sampling	in/hr	-	0.038	0.038	0.038	0.038	0.038	0.039	0.038
Intensity (Ave) - Rain Event	in/hr	-	0.013	0.013	0.013	0.013	0.013	0.013	0.013
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)	Not Available (>0.4)					
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)	Not Available (>0.4)					
Total - Pre-Sampling	in	-	5.09	5.09	5.09	5.09	5.92	5.09	5.92
Total - Rain Event	in	-	6.00	6.00	6.00	6.00	6.00	6.00	6.00

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
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		Object Name	ILBMP0001	ILBMP0002	ILBMP0003	LXBMP0003	B1BMP0002	ILBMP0001
		Sample Name	ILBMP0001S001	ILBMP0002S002	ILBMP0003S004	LXBMP0003S005	B1BMP0002S006	ILBMP0001S002
		Sample Date	3/25/2011	3/25/2011	3/25/2011	3/24/2011	5/17/2011	5/17/2011
		Sample Type	BMP	BMP	BMP	BMP	BMP	BMP
		Location	Lower Parking Lot Spillway	Road Culvert at CM-9	IEL Tributary Drainage	East LOX Unpaved Road	Parking Lot Culvert	Lower Parking Lot Spillway
		Rain Event	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	May 15-18, 2011	May 15-18, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
DIOXINS								
TCDD TEQ_NoDNQ	µg/L	2.80E-08	ND	ND	ND	ND	ND	1.07E-07
INORGANICS								
Aluminum	mg/L	-	1.1 *	0.98 *	2.1 *	0.28 *	<40 *	960 *
Aluminum, dissolved	mg/L	-	0.30 *	0.46 *	1.0 *	0.099 *	<40 *	93 *
Antimony	µg/L	6.0	0.36 Ja*	<0.30 *	0.38 Ja*	<0.30 *	<0.30 *	0.93 Ja*
Antimony, dissolved	µg/L	-	0.31 Ja*	<0.30 *	0.44 Ja*	<0.30 *	0.65 Ja*	0.69 Ja*
Arsenic	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *
Arsenic, dissolved	µg/L	-	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *	<7.0 *
Barium	mg/L	-	0.023 *	0.016 *	0.018 *	0.016 *	0.025 *	0.017 *
Barium, dissolved	mg/L	-	0.015 *	0.013 *	0.016 *	0.014 *	0.025 *	0.0085 Ja*
Beryllium	µg/L	-	<0.90 C*	<0.90 C*	<0.90 C*	<0.90 *	<0.90 *	<0.90 *
Beryllium, dissolved	µg/L	-	<0.90 C*	<0.90 C*	<0.90 C*	<0.90 *	<0.90 *	<0.90 *
Boron	mg/L	1.0	0.048 Ja*	0.039 Ja*	0.19 *	0.042 J*	0.052 *	<0.020 *
Boron, dissolved	mg/L	-	0.045 Ja*	0.037 Ja*	0.19 *	0.039 J*	0.048 Ja*	<0.020 *
Cadmium	µg/L	4.0	0.31 Ja*	<0.10 *	<0.10 *	<0.10 *	<0.10 *	0.41 Ja*
Cadmium, dissolved	µg/L	-	0.20 Ja*	<0.10 *	<0.10 *	<0.10 *	<0.10 *	0.22 Ja*
Chromium	µg/L	-	<2.0 *	<2.0 *	3.5 Ja*	<2.0 *	<2.0 *	2.4 Ja*
Chromium, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Cobalt	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Cobalt, dissolved	µg/L	-	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *	<2.0 *
Copper	µg/L	14	4.4 *	3.2 *	3.9 *	1.5 J*	0.60 Ja*	11 *
Copper, dissolved	µg/L	-	15 *	12 *	20 *	2.4 *	1.3 Ja*	10 *
Iron	mg/L	-	1.2 *	0.82 *	2.0 *	0.30 *	0.42 *	1.0 *
Iron, dissolved	mg/L	-	0.25 *	0.37 *	1.1 *	0.10 *	0.34 *	0.086 *
Lead	µg/L	5.2	2.9 *	0.99 Ja*	0.86 Ja*	<0.20 *	<0.20 *	5.4 *
Lead, dissolved	µg/L	-	1.8 *	1.4 *	2.0 *	<0.20 *	<0.20 *	0.75 Ja*
Manganese	µg/L	-	25 *	7.4 Ja*	10 Ja*	<7.0 *	<7.0 *	25 *
Manganese, dissolved	µg/L	-	9.5 Ja*	<7.0 *	<7.0 *	<7.0 *	<7.0 *	14 Ja*
Mercury	µg/L	0.13	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Mercury, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Nickel	µg/L	100	3.2 Ja*	3.4 Ja*	5.4 Ja*	<2.0 *	<2.0 *	2.6 Ja*
Nickel, dissolved	µg/L	-	2.9 Ja*	2.7 Ja*	4.6 Ja*	<2.0 *	<2.0 *	<2.0 *
Selenium	µg/L	-	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *	<0.50 *
Selenium, dissolved	µg/L	-	<0.50 *	<0.50 *	<0.50 *	<0.50 *	0.66 Ja*	<0.50 *
Silver	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 L*	<0.10 L*
Silver, dissolved	µg/L	-	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *	<0.10 *
Thallium	µg/L	2.0	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *
Thallium, dissolved	µg/L	-	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *	<0.20 *
Vanadium	µg/L	-	<3.0 *	<3.0 C*	4.8 Ja*	<3.0 *	<3.0 *	3.7 Ja*
Vanadium, dissolved	µg/L	-	<3.0 C*	<3.0 C*	3.5 Ja*	<3.0 *	<3.0 *	<3.0 *
Zinc	µg/L	159	67 *	4.5 Ja*	<4.0 *	<4.0 *	17 Ja*	150 *

Table 3-3
BMP Monitoring Sample Results, Outfall 009 Watershed
2010-2011 Rainy Season
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		Object Name	ILBMP0001	ILBMP0002	ILBMP0003	LXBMP0003	B1BMP0002	ILBMP0001
		Sample Name	ILBMP0001S001	ILBMP0002S002	ILBMP0003S004	LXBMP0003S005	B1BMP0002S006	ILBMP0001S002
		Sample Date	3/25/2011	3/25/2011	3/25/2011	3/24/2011	5/17/2011	5/17/2011
		Sample Type	BMP	BMP	BMP	BMP	BMP	BMP
		Location	Lower Parking Lot Spillway	Road Culvert at CM-9	IEL Tributary Drainage	East LOX Unpaved Road	Parking Lot Culvert	Lower Parking Lot Spillway
		Rain Event	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	March 18-27, 2011	May 15-18, 2011	May 15-18, 2011
ANALYTE	UNITS	NPDES PERMIT LIMIT	RESULT	RESULT	RESULT	RESULT	RESULT	RESULT
Zinc, Dissolved	µg/L	-	50 *	11 Ja*	14 Ja*	<4.0 C*	19 Ja*	120 *
MISC								
Total Settleable Solids	ml/L	-	--	--	--	--	--	--
Total Suspended Solids	mg/L	-	29 *	8.0 Ja*	10 *	6.0 J*	<1.0 *	9.0 Ja*
Turbidity	NTU	-	21 *	10 *	15 *	4.4 *	0.60 Ja*	24 *
FIELD MEASUREMENTS								
Conductivity (Field)	mS	-	0.095 *	0.073 *	0.147 *	0.15 *	0.285	0.73
pH (Field)	pH units	6.5 - 8.5	6.7 *	6.27 *	7.04 *	7.7 *	6.85	7.13
Temperature	°C	30	12.8 *	11.3 *	11.7 *	13.4 *	10.9	11.1
Turbidity (Field)	NTU	-	101 *	NR *	NR *	NR *	73	382
RAINFALL MEASUREMENTS †								
Intensity (Ave) - Pre-Sampling	in/hr	-	0.038	0.038	0.038	0.038	0.008	0.008
Intensity (Ave) - Rain Event	in/hr	-	0.013	0.013	0.013	0.013	0.009	0.009
Intensity (Max) - Pre-Sampling	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	0.07	0.07
Intensity (Max) - Rain Event	in/hr	-	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	Not Available (>0.4)	0.08	0.08
Total - Pre-Sampling	in	-	5.92	5.92	5.92	5.09	0.42	0.42
Total - Rain Event	in	-	6.00	6.00	6.00	6.00	0.67	0.67

Notes:

† Total rainfall, average rainfall intensity, and maximum 1-hour rainfall intensity were calculated based on rainfall recorded at a RWQCB-approved weather station within Area IV, except the calculations for the March 18-27, 2011 rain event. Due to a power outage within Area IV from approximately 1:00 p.m. on March 20, 2011 until 5:00 a.m. on March 21, 2011, calculations for this rain event were estimated using other site rain gauges.

See Appendix G for explanation of data validation qualifiers.