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July 15, 2009

Ms. Melissa Jones  
Executive Director  
California Energy Commission  
1516 Ninth Street  
Sacramento, CA 95814-5512

Subject: San Joaquin Solar 1 LLC and San Joaquin Solar 2 LLC  
Fresno County, California 08-AFC-12

Dear Ms. Jones:

In accordance with the provisions of Title 20, California Code of Regulations, URS Corporation (URS), on behalf of San Joaquin Solar 1 LLC and San Joaquin Solar 2 LLC, hereby submits this Draft Storm Water Pollution Prevention Plan (SWPPP) for docketing with 08-AFC-12.

The SWPPP is an appendix to the Response to AFC 08-AFC-12 CEC Staff Data Request Set #1.

Dated July 15, 2009.

Sincerely,

URS CORPORATION

Anne Runnalls  
Project Manager

AR:ml

# DRAFT INDUSTRIAL STORM WATER POLLUTION PREVENTION PLAN AND MONITORING AND REPORTING PLAN

SAN JOAQUIN SOLAR 1 & 2 HYBRID POWER PLANT  
FRESNO COUNTY, CA

*Prepared for*

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WDID No.: To Be Determined

June 19, 2009



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W:\27658033\20090707-DR Set1\FB&D Review of SJS Industrial SWPPP.doc

**SAN JOAQUIN SOLAR 1&2 LLC**  
**CERTIFICATION OF STORM WATER POLLUTION PREVENTION PLAN**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

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(Signature)

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Plant Manager

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**SAN JOAQUIN SOLAR 1&2 LLC  
STORM WATER POLLUTION PREVENTION PLAN  
REVIEW AND REVISION LOG**

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### List of Acronyms and Abbreviations

BAT	Best Available Technology
BCT	Best Conventional Technology
BMP	Best Management Practice
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
HCE	Heat Collection Elements
HMBP	Hazardous Materials Business Plan
HTF	Heat Transfer Fluid
LLC	Limited Liability Company
LORS	Laws, Ordinances, and Regulations
mg/L	milligrams per Liter
MRP	Monitoring and Reporting Program
MW	MegaWatt
NOI	Notice of Intent
NO <sub>x</sub>	Nitrous Oxide
NPDES	National Pollutant Discharge Elimination System
O&G	Oil and Grease
pH	potential of Hydrogen
QA/QC	Quality Assurance/Quality Control
RWQCB	Regional Water Quality Control Board
SCR	Selective Catalytic Reduction
SCNR	Selection Non-Catalytic Reduction
SIC	Standard Industrial Classification
SPCC	Spill Prevention Control and Countermeasure
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TOC	Total Organic Carbon
TSS	Total Suspended Solids
umhos/cm	micro mhos per centimeter
WDID	Waste Discharge Identification Number

## 1.0 INTRODUCTION

This document is the preliminary Storm Water Pollution Prevention Plan (SWPPP) and the Monitoring and Reporting Plan (MRP) developed for the San Joaquin Solar 1 & 2 LLC facility in Fresno County along Jayne Avenue adjacent to the Coalinga State Hospital, to meet the requirements of the California General Permit for Storm Water Discharges Associated with Industrial Activities (General Permit). As of the date of writing, San Joaquin Solar 1 & 2 LLC has not submitted a Notice of Intent (NOI) to the State Water Resources Control Board (SWRCB) to comply with the General Permit. An NOI will be submitted to the SWRCB prior to operations.

### 1.1 ORGANIZATION OF THE SWPPP AND MRP

#### 1.1.1 SWPPP

Section 1 provides information regarding storm water regulation, the regulatory framework, the requirements of the General Permit, review and revision of the SWPPP, availability of the SWPPP as a public document, and certification of the SWPPP.

Section 2 describes the San Joaquin Solar 1 & 2 LLC pollution prevention team responsible for compliance with the General Permit and other environmental programs that indirectly support compliance with the General Permit.

Section 3 provides a description of the industrial activities to be conducted, potential pollutants and contains the definition and categories for both authorized and unauthorized non-storm water discharges.

Section 4 provides a general discussion of Best Management Practices (BMPs) and identifies those BMPs that are implemented throughout the facility and the measures taken to eliminate or reduce the discharge of pollutants to storm water drainage systems. Implementation examples are also included.

Section 5 describes the process of conducting an Annual Comprehensive Site Compliance Evaluation, the results of which must be reported annually to the Central Valley Regional Water Quality Control Board (Central Valley Regional Board).

#### 1.1.2 MRP

Section 6 describes the objectives to be achieved through storm water monitoring as well as the procedures for properly collecting samples from all drainage areas that represent the quality and quantity of the facility's storm water discharges to a surface water body during a storm event.

### 1.2 STORM WATER REGULATORY FRAMEWORK

In 1972 the Federal Water Pollution Control Act (known as the Clean Water Act) was amended to effectively prohibit discharge of pollutants to "waters of the United States" from any point source unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The U.S. Environmental Protection Agency (EPA) has delegated administration of the NPDES program



within California to the State of California. California's Porter Cologne Act gives the SWRCB and the nine Regional Water Quality Control Boards (Regional Boards) the authority to administer the NPDES program.

The 1987 amendments of the Clean Water Act added Section 402(p), which established the framework for regulating discharges of storm water from industrial activities and municipal separate storm sewer systems. The EPA's enacting regulations require operators of certain categories of industry<sup>1</sup> including manufacturing facilities, especially if materials or activities are exposed to storm water, to obtain coverage under an NPDES permit for runoff from their facilities to a storm water drainage system or directly to surface waters.

The SWRCB adopted the General Permit on April 17, 1997 (Order No. 97-03-DWQ). Although often referred to "storm water regulations" what is actually being regulated by the General Permit is the discharge of pollutants into a storm water drainage system or a surface water body, whether those pollutants are transported by storm water runoff or some other flow (a non-storm water discharge).

### 1.3 FUNDAMENTAL REQUIREMENTS OF THE GENERAL PERMIT

There are four fundamental requirements of the General Permit. Industrial facility operators must:

- ◆ Eliminate unauthorized non-storm water discharges;
- ◆ Develop and implement a SWPPP;
- ◆ Perform monitoring of storm water discharges and non-storm water discharges; and
- ◆ Report annually to the appropriate Regional Board.

While the General Permit authorizes storm water discharges and conditionally<sup>2</sup> authorizes some specific non-storm water discharges from facilities, discharges of substances or materials other than storm water and authorized non-storm water discharges are prohibited. Furthermore, storm water discharges and authorized non-storm water discharges must be managed such that they do not cause or threaten to cause pollution, contamination, or nuisance. Prohibited discharges (also referred to as unauthorized discharges) must be either eliminated or permitted by a separate NPDES permit or Waste Discharge Requirements. Section 3.0 of this SWPPP addresses the topic of non-storm water discharges in greater detail.

### 1.4 COMPLIANCE WITH THE GENERAL PERMIT

An industrial facility must implement BMPs that meet best available technology economically achievable (BAT) or best conventional pollutant control technology (BCT) for the elimination or minimization of pollutants discharged with storm water or authorized non-storm water discharges. The San Joaquin Solar 1 & 2 LLC facility does not have effluent limitations applicable to its storm water discharges.

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<sup>1</sup> These general categories of industry are defined by Standard Industrial Classification (SIC) code in 40 Code of Federal Regulations Section 122.26(b)(14).

<sup>2</sup> The General Permit provides that authorized non-storm water discharges must meet specified conditions. These conditions are described in Section 3.0.

Development and implementation of a SWPPP that complies with the requirements in Section A of the General Permit and that includes BMPs that achieve BAT and BCT constitute compliance with the requirement of reducing or preventing pollutants associated with industrial activity in storm water and authorized non-storm water discharges. A completed SWPPP checklist indicating the location in the SWPPP of required information is included in Appendix B.

### 1.5 AVAILABILITY OF THE SWPPP AND MRP

The SWPPP and MRP are public documents pursuant to Section 308(b) of the Clean Water Act. The SWPPP and MRP must be retained on-site and made available upon request to a representative of the SWRCB, Central Valley Regional Board, EPA or local agency. Further, a copy of the SWPPP and MRP should be readily available at the San Joaquin Solar 1 & 2 LLC facility office.

### 1.6 AUTHORIZED REPRESENTATIVE AND CERTIFICATION OF THE SWPPP

The SWPPP and MRP must be certified by a responsible corporate officer or duly authorized representative. A person is a duly authorized representative only if:

- ◆ The written authorization is made by a responsible corporate officer (e.g., president, vice president, chief financial officer, treasurer) or the facility manager if authority to sign documents has been assigned or delegated to the facility manager in accordance with corporate procedures; and
- ◆ The authorization specifies either an individual or position having responsibility for the overall operation of the facility, such as the position of manager, operator, superintendent, or a position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the facility.

For San Joaquin Solar 1 & 2 LLC, the duly authorized representative will be provided in the SWPPP prior to certification. Prior to certification, this SWPPP and MRP will be assessed by the facility manager for compliance with the General Permit. Compliance is based on the implementation of BMPs, both structural and non-structural, to reduce or eliminate pollutants in discharges from the storm water drainage system via storm water runoff or authorized non-storm water flows. Selected site environmental and safety personnel shall ensure that the elements of this SWPPP and MRP are implemented. The executed certification statement appears as the first page following the title page of this SWPPP and MRP.

### 1.7 REVIEW AND REVISION OF THE SWPPP AND MRP

The SWPPP and MRP will be reviewed at least annually to determine if any revision is necessary. The SWPPP and MRP will be revised to reflect changes in industrial activities that:

- ◆ May significantly increase the quantities of pollutants in storm water runoff;
- ◆ Cause a new area of industrial activity at the facility to be exposed to storm water or authorized non-storm water discharges; or
- ◆ Start-up of an industrial activity that would introduce a new pollutant source at a facility.

## Industrial Storm Water Pollution Prevention Plan

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In determining if revision of the SWPPP and MRP is necessary, the Plant Manager will review the quarterly reports for storm water and non-storm water visual observations and the Annual Comprehensive Site Compliance Evaluation (See Appendix B). Review and revision of the SWPPP and MRP will be documented in the table on the page that follows the Certification Statement, which immediately follows the title page of this SWPPP.

## 2.0 SITE DESCRIPTION

### 2.1 FACILITY DESCRIPTION

The San Joaquin Solar 1 & 2 LLC facility is located on West Jayne Avenue; approximately 6 miles east of Coalinga and approximately 3 miles west of Interstate 5, in an agricultural area of Fresno County, California. The Facility will be situated on one section of land, approximately 640 acres. The Project site is located in an area zoned for agricultural uses as specified in the Fresno County General Land Use Plan. Surrounding land uses include agricultural fields to the north, agricultural lands to the south, the Gujarral Hills Oil Field to the east, and the Coalinga State Hospital to the west.

The Project includes the construction, operation and maintenance of two 53.4 MW net solar hybrid power stations and ancillary systems. The two components of each Plant are the solar field and the biomass facilities. Each solar field has the heat-generating capacity to fully load its respective turbine to produce the net 53.4 MW. Each biomass facility will be used to maximize the turbine's energy output during shoulder solar hours (as the sun rises and sets) and will operate at night to produce up to 40 MW of energy.

The solar field design will use parabolic solar collectors to concentrate the sun's radiant energy on Heat Collection Elements (HCEs) that contain a circulating Heat Transfer Fluid (HTF). Hot HTF is then conveyed to heat exchangers to produce steam in a conventional reboiler for expansion in a reheat steam turbine generator. The biomass facility will use fluidized bed combustion technology to burn orchard waste and municipal greenwaste. The biomass component will run up to 24 hours a day in winter months when solar intensity is less. During summer, the biomass plant will start up as the sun approaches the horizon, run all night, then ramp down as the sun rises the next day. Incorporating the biomass facility in this manner increases the power plant's total energy output and maximizes turbine use. The biomass combustion process will produce ash equal to approximately 5% of the biomass consumed.

Ancillary facilities will include buildings and facilities for assembly, maintenance and operations, as well as the gathering lines required to transmit electricity from the field to the substation.

There is no storm drain infrastructure in the vicinity.

#### 2.1.1 Facility Activities

Activities at the San Joaquin Solar 1 & 2 LLC facility, that may affect storm water runoff water quality, include:

- ◆ Raw Material storage;
- ◆ General Waste storage;
- ◆ Hazardous Material storage;
- ◆ Evaporation pond;
- ◆ Equipment storage;

- ◆ Loading and off loading of trucks;
- ◆ Parking of trucks and equipment.

The Standard Industrial Classification code for the San Joaquin Solar 1 & 2 LLC facility is 4911 (1987 SIC) or 221119 (2002 NAICS) – Other Electric Power Generation/ Power Generation , Solar Electric.

The site map provided in Appendix A illustrates key features relevant to the storm water drainage system and the industrial activities conducted onsite, including potential pollutant sources that may be exposed to precipitation, storm water runoff, or non-storm water discharges, drainage patterns (surface flow and storm drains), discharge locations, discharge sampling locations, and structural control features.

### 2.2 OTHER RELEVANT FACILITY PLANS

In addition to this SWPPP and MRP, the San Joaquin Solar 1 & 2 LLC facility may also be required to develop and implement a Hazardous Materials Business Plan (HMBP) and/or Spill Prevention Control and Countermeasure Plan (SPCC Plan) that complements the goal of reducing and preventing pollutant discharges. The SPCC Plan would include the material handling procedures, storage requirements, and procedures for clean up of any spill or leak.

### 2.3 SIGNIFICANT LEAKS AND SPILLS – HISTORICAL

The San Joaquin Solar 1 & 2 LLC facility location has historically been used for agricultural purposes. The completed facility has not reported any spills or leaks that have resulted in significant quantities of spilled or leaked materials being discharged in storm water or non-storm water discharges. The policies, plans, and procedures in place at San Joaquin Solar 1 & 2 LLC facility provide that even small spills and leaks are contained and cleaned-up as quickly as possible. If the clean-up of spilled or leaked material is not completed prior to a forecasted precipitation event, precautions are taken to assure that precipitation and runoff do not contact the remaining spilled or leaked material.

### 2.4 POLLUTION PREVENTION TEAM

The environmental manager and appointed delegates are responsible for implementing the SWPPP and MRP and for the administrative responsibilities associated with the SWPPP and MRP. These responsibilities include:

- ◆ Implementing, administering and revising the SWPPP and MRP;
- ◆ Conducting weekly undocumented walk-throughs to ensure that BMPs are appropriate and being implemented consistently throughout the facility;
- ◆ Conducting monthly documented inspections utilizing the Evaluation Checklist inspection report;
- ◆ Conducting the Annual Comprehensive Site Compliance Evaluation;
- ◆ Ensuring that all reporting and sampling requirements are met, including the filing of the Annual Report to the State Water Resources Control Board. The current web site location for the Annual Report is [http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/annualreport.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/annualreport.shtml)
- ◆ Conducting the storm water and non-storm water visual observations;

- ◆ Ensuring that sampling kits are prepared for sampling;
- ◆ Implementing the Emergency Response Plan and Procedures (part of the Hazardous Waste Management Program);
- ◆ Conducting storm water training for facility personnel; and
- ◆ Maintaining the necessary records and files.

Other facility personnel may also have implementation responsibilities for the SWPPP and MRP, when delegated.

**Storm water samplers** (Site Environmental Coordinator, Team Leaders or trained designees) responsibilities include:

- ◆ Collecting storm water samples in accordance with the MRP during their respective shifts.

In addition to the personnel listed above, other employees at the San Joaquin Solar 1 & 2 LLC facility are trained in storm water issues and play an important role in the detection and prevention of pollution via the storm water drainage system. Table 2-1 includes contact information in case of a spill or other emergency. Table 2-1 will be updated with the appropriate contact information prior to finalizing the Industrial SWPPP.

**Table 2-1. Contact List**

Contact Title	Contact Name	Contact Number	Emergency Contact Number
Facility Manager			
Assistant Facility Manager			
Facility Environmental Coordinator			
Assistant Environmental Coordinator			

## 2.5 TRAINING FOR FACILITY PERSONNEL

The Environmental and Safety Manager coordinates training related to storm water management on at least an annual basis and for new hires to inform those with specific responsibilities in this SWPPP and MRP what their responsibilities are and how to accomplish those tasks, including implementation of BMPs. This training typically occurs in late summer or early fall, shortly before the start of the wet season (October 1 through April 30).

Additionally, general awareness training is provided annually to all employees whose activities may impact storm water discharges. The purpose of this training is to educate workers on activities that can impact storm water discharges, and to help in the implementation of BMPs.

The training records are kept for a period of no less than five years.

### 3.0 FACILITY INDUSTRIAL ACTIVITIES AND MATERIALS

This section presents the industrial activities that are performed and the materials that are stored on this site and may affect the storm water runoff water quality.

#### 3.1 INDUSTRIAL ACTIVITIES

The manufacturing activities in this section present those known at the time of document preparation. If manufacturing processes change, either increasing or decreasing the amount of outdoor activities, this section should be revised along with the appropriate BMPs found in Section 4.0.

##### ***Industrial Processes***

Maintenance activities are limited to preventative and corrective maintenance of equipment which is done by facility personnel or subcontractor. These activities include equipment fabrication, oil changes, topping off coolant, greasing fittings, etc. All coolant and oil waste material is stored and disposed of in accordance with applicable waste laws and regulations. A forklift may be utilized on site. Waste removal is part of the contract.

##### ***Material Handling and Storage Areas***

Trucks delivering raw materials, including biomass materials are unloaded onsite on the eastern side of the facility of the site and moved for storage to the site's warehouse. Other raw materials included general supplies, replacement parts and solar panels. These raw materials are temporarily stored within a covered structure.

##### ***Dust and Particulate Generating Activities***

The plant facilities are considered an active industrial site. All of the activities at the site produce minimal dust. The most significant pollutant at this facility is windborne materials (silt and debris) that collects on the plant from the surrounding panel farm and surrounding agricultural areas that collect on the plant structures. During rainy periods, this material washes off the structures into the storm water drainage paths. The solar mirrors will have scheduled washing using specialized spray equipment.

##### ***Significant Spills and Leaks***

Spills and/or leaks of asphalt, oil and lubricants can occur outdoors during repairs and maintenance. Spills and/or leaks can also occur in and around the chemical storage areas during the transfer of materials.

##### ***Non-Storm Water Discharges***

There are no non-storm water discharges from this facility to storm water conveyance system. This plant will be recycling all of its wastewater for re-use in the power generation process. Waste water from the demineralization/reverse osmosis process will be stored in evaporation ponds.

##### ***Soil Erosion***

Large portions of the site will be partially developed with solar panels however not paved with asphalt or cement surfaces. Sedimentation and erosion control measures may be applicable at this facility.

## 3.2 SIGNIFICANT MATERIALS

A number of materials are stored and used, or stored, on-site. The following table summarizes these materials, their maximum allowable quantities and how they are received or stored at this facility. This table should be verified each year to confirm materials types, quantities and locations.

**Table 3-1. List of Significant Materials**

Material Name	Use	Maximum Quantity On-Site	Location(s) Found	Storage Type
Aqueous ammonia ([19%] NH <sub>4</sub> (OH))	NOx emissions control	40,000 gallons for each plant	SCR Unit	Aboveground tank
Heat Transfer Fluid (Therminol VP-1)	Transfers energy from solar field and biomass system to power block	185,000 gallons for each plant	Plant System, Power Block Area	Vessels within the plant circulation loop system
Chlorine	Water treatment	500 gallons for each plant	Water Treatment Area	Tank
Hydrochloric Acid	Water treatment	TBD	Water Treatment Area	Tank
Cation and Anion Beads	Water treatment	TBD	Water Treatment Area	TBD
Diesel Fuel	Firewater pump driver	300 gallons for each plant	Firewater Skid	Tank
Cleaning Chemicals/Detergents	Periodic cleaning	500 liters for each plant	Warehouse/shop area	55-gallon drums and small containers
Water treatment Chemicals	Oxygen scavenger	10,000 gallons for each plant	Water Treatment Building	Tank
Lubricating Oil	Lubricate rotating equipment (e.g., STG lube oil systems)	1,585 gallons each plant 3,170 gallons total	Contained in storage tanks on equipment skids	Tanks
Laboratory Reagents	Water laboratory analysis	4 liters	Water Treatment Building	Small containers
Mineral Transformer Insulating Oil	Generator Step-Up (GSU) transformers	11,000 gallons per GSU 22,000 gallons total	Transformer Area	Contained within transformers and electrical switches
Mineral Transformer Insulating Oil	Standby Transformer	4,000 gallons	Standby Transformer Area	Contained within transformers and electrical switches
Acetylene, Oxygen, Other Welding Gases	Maintenance Welding	TBD	Shop/warehouse	Cylinders of various volumes

Source: Project Description

Notes: All numbers are approximate.

STG = steam turbine generator



Wastes from the facility are stored in designated containers and/or areas, and are disposed of in accordance with applicable local, state, and federal regulations. Tables 3-2 and 3-3 summarize the types, quantities and location of hazardous materials used and hazardous wastes generated on site.

### Non-Hazardous Solid Waste

SJS 1&2 will produce maintenance and plant wastes typical of solar hybrid power generation operations. The following types of non-hazardous solid waste may be generated: paper, wood, plastic, cardboard, deactivated equipment and parts, defective or broken electrical materials, empty non-hazardous containers, and other miscellaneous solid wastes, including typical refuse generated by workers. Office paper, newsprint, aluminum cans, wood, insulation, yard debris, concrete, gravel, scrap metal, cardboard, glass, plastic containers, and other non-hazardous waste materials will be segregated and recycled to the extent practical, and the remainder will be regularly removed by a certified waste-handling contractor for disposal at a Class III landfill.

The Project will burn a combination of locally available biomass fuels. The fluidized bed combustion process will include blending limestone with fresh fuel in the combustor. Limestone is added primarily to absorb SO<sub>2</sub> and trace amounts of chlorides that might be present in the fuel, and also provides many beneficial characteristics to the ash.

Fly ash will be collected using a combination of mechanical collectors and bag houses. All ash will be accumulated in ash storage vessels, and then loaded on trucks for removal. The ash produced from burning biomass has several uses other than acid-scrubbing in the gasification process. It will contain several beneficial nutrients (10% P<sub>2</sub>O<sub>5</sub>, 12% K<sub>2</sub>O, 13.5% Ca, and 5% Mg) and may have use as a soil amendment or fertilizer for agricultural crops. Typically, ash generated by existing biomass facilities in California is sold into the marketplace for a variety of purposes, including supplements for the manufacture of aggregate and concrete, soil mineral supplements and bedding material for livestock pens. All of the ash produced from the facility is anticipated to be marketable for these purposes.

If the ash is characterized as non-hazardous or hazardous waste, it will be disposed of in accordance with applicable LORS in either a Class I or Class III Landfill, respectively.

Non-recyclable inert wastes will be stored in covered trash bins in accordance with local ordinances and picked up by an authorized local trash hauler on a regular basis for transport to and disposal in a suitable landfill.

### Liquid Wastes

Industrial wastewater will consist of solar thermal system blowdown, solar thermal washdown, air-cooled condenser washdown, and oil/water separator effluent. Industrial wastewater will be routed to the Water Treatment System. Area drains will be located near mechanical equipment where it is determined that oil could mix with rainwater or other water sources. Water collected by these drains will go to the oil/water separator, which separates out any oil before the effluent goes to the sewer line. Oil-contaminated fluid will be pumped out by a vacuum truck on an as-needed basis and disposed of at a facility specifically qualified to handle such waste.

Hazardous containments will not have drains but will be pumped out by vacuum pump if hazardous materials are present. Rainwater will be pumped to the storm drain system after first confirming that no hazardous materials are present. The plant site will consist of paved roads, paved parking areas, and graveled areas. Stormwater will be diverted from the paved surfaces to the solar field for evaporation/soil absorption. Sanitary waste will be discharged into a sanitary leach field, and will be designed to meet RWQCB guidelines.

### Hazardous Waste

Hazardous waste generated will include used oils from equipment maintenance and oil-contaminated materials, such as spent rags, or other cleanup materials. Used oil generated will be recycled. Hazardous waste that can not be recycled will be disposed of in a Class I waste disposal facility. Table 3-3, Summary of Operation Waste Streams and Management Methods, summarizes the hazardous waste to be generated during plant operation.

Hazardous wastes will be collected by a licensed hazardous waste hauler and disposed of at a licensed hazardous waste facility. Hazardous wastes will be transported off site using a hazardous waste manifest. Copies of manifest reports, waste analysis, exception reports, destruction certifications, etc., will be kept on site and made accessible for inspection for 3 years. Land disposal restriction notices/certificates will be kept on site and accessible for inspection for 5 years.

The amount of contaminated soil that may result from HTF spills or leaks should not exceed 20 cubic yards in a 3-month period. A 2-acre parcel of land in the SJS 1&2 common area will be used for temporary storage of contaminated soil until it is transported off site. The maximum spill that would occur would result from a rupture of one of the expansion vessels. The potential impact has been minimized by designing a containment pit under the vessels of sufficient size to hold the spill. Shutoff valves are also located on the end of every Solar Collector row to isolate HCE breakage or leaks. Major HTF flow lines will all have isolation valves in strategic locations.

Accumulated wastes and hazardous materials are stored in designated containers and/or areas only.

## Industrial Storm Water Pollution Prevention Plan

**Table 3-2. List of Accumulated Waste**

<b>Material Name</b>	<b>Type</b>	<b>Maximum Quantity On-Site</b>	<b>Location(s) Stored</b>	<b>Storage Type or Method of Disposal</b>
Spent batteries – Lead Acid, Alkaline	Hazardous Waste	Intermittent	Hazardous Waste Storage Area	Batteries stored in waste storage area
Oily Absorbent	Hazardous Waste	55 gallons per month for each plant	Hazardous Waste Storage Area	Drum
Waste Oil/Sludge – from Oil/Water separator	Hazardous Waste	500 gallons for each plant	Hazardous Waste Storage Area	Oil/Water Separator
Used Hydraulic Fluid, Oils and Grease, Oily Filters – Hazardous, recyclable	STG and other users of hydraulic actuators and lubricants	5.3 gallons for each plant 10.6 gallons total	Hazardous Waste Storage Area	Temporarily stored onsite and then disposed of properly offsite or recycled
Spent batteries – Hazardous, recyclable	Lead Acid,	5/year, Total 10/yr	Store <90 days Hazardous Waste Storage Area	Batteries stored temporarily in waste storage area then recycled
	Alkaline	400/year for each plant, Total 800/year	Hazardous Waste Storage Area	Batteries stored temporarily in waste storage area then recycled
Oily Rags – Non-hazardous	STG and other users of hydraulic actuators and lubricants	55 gallons from each plant 110 gallons total	Store <90 days in appropriate container onsite	Laundry at authorized facility.
Oily Absorbent – Hazardous	STG and other users of hydraulic actuators and lubricants	55 gallons from each plant 110 gallons total	Store <90 days Hazardous Waste Storage Area	Dispose to authorized waste disposal facility.
Waste Oil/Sludge – Hazardous, recyclable	Oil/water separator	500 gallons from each plant 1000 gallons total	Store <90 days Hazardous Waste Storage Area	Dispose to authorized waste recycle facility.
Fly Ash	Biomass Combustion	10,000 – 25,000 tons from each plant 20,000 - 50,000 tons total	Collected and stored in ash storage vessels	Reuse, sellable or characterize and dispose at a non-hazardous landfill.

Notes: All numbers are approximate.  
STG = steam turbine generator

**Table 3-3. List of Stored Hazardous Materials**

Material	Container Type/Quantity	Spill/Leak Prevention BMP
Aqueous ammonia ([19%] NH <sub>4</sub> (OH))	Above ground tanks/ 40,000 gallons for each plant	Spill containment berm or equivalent secondary containment method.

Aqueous ammonia would be present in sufficient quantity and concentration to be a state regulated substance that would require the development of a RMP. Aqueous ammonia would be used in the Selective Non-Catalytic Reduction (SNCR) and Selective Catalytic Reduction (SCR) units to reduce NO<sub>x</sub> emissions. The 19.1 percent aqueous ammonia solution would be stored in two storage tanks for each Plant that each hold a maximum of 20,000 gallons.

### 3.3 NON-STORM WATER DISCHARGES

A non-storm water discharge is any discharge or flow to a storm water drainage system that is not composed entirely of storm water runoff. There are both authorized and unauthorized non-storm water discharges. On this site, it is possible to have the following **authorized** non-stormwater discharges:

- ◆ Monthly Fire hydrant flushing;
- ◆ Potable water sources, including potable water related to the operation, maintenance, or testing of potable water systems. On this site they include eye wash and shower stations, which are checked monthly;
- ◆ Drinking fountain water; and
- ◆ Landscape watering.

Other than the landscape watering, most authorized discharges are only performed on an annual basis. It is important to confirm that when these authorized discharges occur the flows do not come in contact with pollutant sources.

Non-storm water discharges that contain significant quantities of pollutants or that do not meet the conditions provided in the General Permit Special Conditions D.1.b are prohibited. Typical examples of prohibited non-storm water discharges for this facility include, but are not limited to:

- ◆ Floor wash water;
- ◆ Dumpster Cover/Waste container drainage;

These discharges need to be either maintained on site, or mitigated through a BMP that has been selected to provide pollutant reduction.

## 4.0 FACILITY SPECIFIC BEST MANAGEMENT PRACTICES

### 4.1 POLLUTION PREVENTION THROUGH BMPs

It is important to have an understanding of what BMPs are and what pollutants they do or don't remove. On this site, there are multiple types of BMPs implemented. The BMPs on this site include practices, procedures, policies, prohibitions, schedules of activities, structures or devices that are implemented to prevent or minimize pollutants coming in contact with precipitation, storm water runoff, or non-storm water flows. For purposes of discussion, BMPs are often categorized as either "source control" BMPs or "treatment control" BMPs.

Source control BMPs include all types of measures designed to prevent pollution at the source, that is, to keep storm water from contacting pollutants in the first place. Source control BMPs are generally simple, low-maintenance, cost-effective and are broadly applicable. They may be categorized as either non-structural or structural. For this site, the primary source control BMP is good housekeeping.

In contrast to source control BMPs, treatment control BMPs are methods of treating storm water runoff to remove pollutants. More importantly, treatment control BMPs are typically not as effective as source control BMPs, and the ineffectiveness is highly dependent on regular maintenance. Nevertheless, they can be appropriate and effective under certain conditions. However, treatment control BMPs typically do not remove all pollutants from storm water runoff and should not be regarded as disposal systems. An example of a treatment control BMP on this site would include the use of filtration units within the catch basins.

There are also structural BMPs on this site that assist with flow control, debris containment and raw and waste material storage. These types of BMPs including curbs, berms, v-ditches and trash container covers are all adequate and maintainable for the intended uses at this Facility.

The following sections present the site specific BMPs for the San Joaquin Solar 1 & 2 LLC facility, beginning with source control BMPs.

### 4.2 SOURCE CONTROL BMPs

The first and typically most effective BMPs are source control based. At the San Joaquin Solar 1 & 2 LLC facility, source control BMPs are encouraged for all outdoor activities and storage. The following list of common source control BMPs may be implemented for all current and future activities and storage locations.

#### 4.2.1 Source Control BMP #1 - Good Housekeeping

Good housekeeping practices include activities that are intended to maintain a clean site and keep equipment in good working order to prevent storm water quality problems from occurring. Daily cleanup and inspections are the most effective means of achieving good housekeeping. For the most part, good

housekeeping is a day-to-day activity that does not require a large expenditure of time or expense, and should be implemented on an ongoing basis. For this site, required good housekeeping practices include:

- ◆ Tools and materials are returned to designated storage areas after use;
- ◆ Waste materials are collected and properly disposed after the completion of each job, shift, or day as appropriate;
- ◆ All outdoor work areas are kept neat and clean;
- ◆ Outdoor work areas are washed on occasion. In such cases, all wash waters are contained, collected, and properly disposed; and
- ◆ Outdoor waste or trash receptacles are covered and emptied regularly and the adjacent areas inspected for misplaced or wind-blown litter.

### 4.2.2 Source Control BMP #2 - Preventive Maintenance

As previously stated, good housekeeping practices include activities that are intended to keep equipment in good working order to prevent storm water quality problems from occurring. On this site, preventive Maintenance BMPs include regular inspections and maintenance of any of the equipment or machinery which are located outside. To reduce the likelihood of breakdown or failure, major outdoor equipment should have a preventive maintenance schedule for inspection and replacement or repair of fluids (e.g., hydraulic, lubricating, cooling), greases, seals, hoses, filters, pressure gauges, piping, etc. Paved driveways and storage areas should not be allowed to degrade to the point where they erode and contribute pollutants to runoff. Leaky roofs, broken doors, cracked pavement and berms, and any other enclosure or structural defects that may impact the quality of storm water runoff should be promptly repaired.

### 4.2.3 Source Control BMP #3 - Proper Materials Handling and Storage

Materials handling and storage BMPs relate to controlling the potential for leaks, spills and losses of materials delivered, used, and stored at a facility. Spills and leaks of materials can accumulate in soils or on surfaces and be carried away in storm water runoff or authorized non-storm water discharges. Examples of appropriate materials handling and storage BMPs are:

#### ***Materials Use***

- ◆ Only obtain the amount of materials needed to finish a particular task;
- ◆ Limit waste production by keeping good records and reviewing activities;
- ◆ Recycle materials whenever possible;
- ◆ Read and follow manufacturer directions for use of materials and review the associated Material Safety Data Sheet;

#### ***Materials Storage***

- ◆ Store materials indoors or in a covered area where exposure to storm water is minimized;
- ◆ Store lead-acid batteries indoors and within secondary containment;

- ◆ Use a hazardous materials storage container with spill containment or flammable materials lockers when appropriate;
- ◆ Locate storage areas away from vehicle and equipment paths to reduce the potential for accident-related leaks;
- ◆ Do not store drums or other containers close to discharge points to receiving waters;
- ◆ Provide informational signing, labels, restricted access, locks, inventory control, overhead coverage, and secondary containment for all hazardous material storage areas or container units; and
- ◆ Conduct regular inspections for leaks and other pollutant discharges.

### 4.2.4 Source Control BMP #4 - Proper Waste Handling

Waste handling BMPs relate to properly controlling, collecting, storing, and disposing of wastes that are generated at a facility. All facility personnel should be aware that disposing any waste (including wash waters) into a storm drain inlet or storm water conveyance is considered illegal dumping. Likewise, disposing of waste (including wash waters) onto a paved or unpaved surface such that it may be carried to a storm drain inlet or storm water conveyance is also considered illegal dumping. Examples of appropriate waste handling BMPs are:

- ◆ Sweep or vacuum (dry methods) work areas to collect particulates and debris frequently;
- ◆ Limit waste production by keeping good records and reviewing activities;
- ◆ Recycle materials whenever possible;
- ◆ Separate and segregate different types of wastes;
- ◆ Store waste materials indoors or in a covered area where exposure to storm water is minimized. Arrange for regular waste disposal;
- ◆ Use hazardous materials storage lockers with spill containment or flammable materials lockers when appropriate;
- ◆ Locate the waste storage area away from vehicle and equipment paths to reduce the potential for accident-related releases;
- ◆ Provide informational signage, labels, restricted access, inventory controls, overhead coverage, and secondary containment for all hazardous material storage areas or container units; and
- ◆ Conduct regular inspections for leaks and pollutant discharges.

### 4.2.5 Source Control BMP #5 - Spill Prevention and Response

Spill clean-up can be labor-intensive and costly, involving expenses to contain the spill, collect the spilled substance, dispose of materials properly, and to file reports with regulatory agencies, not to mention possible monetary fines. Spills and leaks are some of the most significant sources of water pollution and are, in most cases, avoidable.

Spill prevention and control procedures include:

- ◆ Placing containment features around areas where fluids are stored, so releases can be prevented, easily detected, and controlled;
- ◆ Using drip pans for maintenance operations involving fluids and under leaking vehicles and equipment waiting repair;
- ◆ Placing spill kits in areas where fluids are stored or in areas where activities may result in a spill;
- ◆ Providing training for proper use of materials and equipment used during operations and maintenance activities;
- ◆ Providing training for proper use of spill response equipment and supplies;
- ◆ Conducting outdoor maintenance activities on paved surfaces to allow for easy detection, control, and cleanup of spills;
- ◆ Blocking nearby storm drain inlets or closing valves in storm drains when conducting maintenance or fluid transfers.

Spill prevention, control, and cleanup applies to all materials and wastes—not only hazardous substances. The toxic water quality effects from spills of hazardous substances (e.g., acids, oils, greases, fuels, solvents, pesticides) are commonly understood. However, non-hazardous materials—for example, biodegradable soaps, litter, and debris, among others—can also greatly impact water quality.

### 4.2.6 Source Control BMP #6 – Staff Training

Training/educating personnel regarding the importance of the immediate clean up of accumulated trash and the proper handling and disposal of hazardous materials and waste. Additionally, general awareness training is provided annually to all employees whose activities may impact storm water discharges. The purpose of this training is to educate workers on activities that can impact storm water discharges, and to help in the implementation of BMPs.

## 4.3 TREATMENT CONTROL BMPs

At the San Joaquin Solar 1 & 2 LLC facility, there are no existing treatment control BMPs that are used treating runoff. Absorbent pads, socks or other spill containment materials are recommended for use when accidental spills occur during delivery or other activities.

If additional treatment control BMPs are installed at this facility, the design, specifications and maintenance requirements for these recommended BMPs are to be included into this SWPPP document. When installed and implemented these BMPs will also need to be included into the inspection program. Structural BMPs.

As previously discussed, structural BMPs are included in the existing site design. These BMPs include the following:

- ◆ Drainage swales/ditches
- ◆ Main facility drive and roadways are paved or stabilized
- ◆ Other items to be determined during final site design



Since the facility is not paved, the potential for on-site contribution of sediment to the storm water flow during storm events is moderate. Drainage features should be routinely inspected during both the dry and rainy season and recorded on inspection forms. Corrective measures are promptly initiated if evidence of erosion is identified

### 4.4 BMP IMPLEMENTATION EXAMPLES

Typically, mitigating a particular activity for preventing pollutant runoff means implementing multiple BMPs. For example, minor equipment repairs and maintenance activities occur onsite. These activities can contribute oil, lubricants, heavy metals, acidic and basic liquids to potential storm water pollutants. To manage this pollutant source, the following BMPs would be used:

- ◆ Good housekeeping;
- ◆ Maintenance is performed in a designated area only;
- ◆ Drip pans and absorbent mats are placed under all equipment undergoing repairs/maintenance;
- ◆ Yard is inspected daily for signs of spills;
- ◆ Personnel are trained in proper equipment handling, spill prevention and response procedures;
- ◆ Spill clean up material is containerized in the waste oil and hazardous materials storage areas;
- ◆ All spills are immediately cleaned by personnel trained in spill response procedures;
- ◆ Waste material is managed and disposed of in accordance with applicable waste laws and regulations;
- ◆ Emergency Plan and Procedures are implemented.

#### 4.4.1 BMP Implementation

At the San Joaquin Solar 1 & 2 LLC facility, all chemicals and wastes will be clearly labeled and stored in containment structures and the waste oil storage tank respectively. These storage areas are anticipated to be located at the eastern portion of the property. The storage areas can be a source of many pollutants (See Tables 3-2 and 3-3). In order to reduce/eliminate these potential sources of storm water pollution, the following BMPs are anticipated:

- ◆ Good housekeeping;
- ◆ Secondary containment structures;
- ◆ Personnel are trained in proper maintenance, cleaning and spill response procedures;
- ◆ Spill clean up material is placed in the waste oil, hazardous materials and diesel fuel storage areas;
- ◆ Areas are routinely inspected for signs of spills or leaks;
- ◆ Spills and leaks are cleaned immediately by personnel trained in spill response procedures; and
- ◆ Materials are recycled whenever possible.

## Industrial Storm Water Pollution Prevention Plan

The following table should be used as a reference to provide facility staff recommended BMPs for particular facility activities and locations. Table 4-2 presents the general location, activity, pollutant source, pollutant type and applicable BMP.

**Table 4-2. Identification of Potential Pollutant Sources and  
List of Current BMPs**

Location on- Site	Activity	Pollutant Source	Pollutant	BMPs
Maintenance/ Storage Area	Maintenance	Windblown sediment on ground and plant surfaces	Sediment	<ol style="list-style-type: none"> <li>1. Since maintenance is critical to preventing leaks and spills, routine monthly inspections are performed to check for : <ul style="list-style-type: none"> <li>• External corrosion and structural failure;</li> <li>• Spills and overfills due to operator error;</li> <li>• Failure of piping system;</li> <li>• Leaks or spills during pumping of liquids from storage containers to equipment.</li> </ul> </li> <li>2. Chemical storage tanks are kept on an concrete slabs and surrounded by an 8 in. concrete block wall;</li> <li>3. Waste oil storage tank is kept on a concrete slab and surrounded by an 8 in concrete curb;</li> <li>4. Good housekeeping;</li> <li>5. Outdoor work areas are walked through daily for signs of spills;</li> <li>6. Spill clean up material is kept by the waste oil storage tank (the west side of vat, maintenance area and mixer tank areas) and the diesel fuel tank and a sign indicating its location is posted ;</li> <li>7. Personnel are trained in proper equipment handling, spill prevention and chemical transfer and spill response procedures.</li> <li>8. All spills are immediately cleaned by personnel trained in spill response procedures;</li> <li>9. An Emergency Response Plan and Procedures are in place to ensure proper emergency or spill control measures are maintained.</li> </ol>
		Petroleum based chemicals and lubricants	Organics	
		Spills and leaks during delivery/Spills caused by overfilling	Petroleum hydrocarbons/ Soaps/surfactants	
		Leak from chemical storage	Petroleum hydrocarbons/ Soaps/surfactants	
		Rainfall run on or runoff areas	Petroleum hydrocarbons/ Soaps/surfactants	
	Waste Oil Storage	Lubrication of equipment	Petroleum hydrocarbons	<ol style="list-style-type: none"> <li>1. Waste oil stored in designated area within secondary containment.</li> <li>2. Good housekeeping practices in-place.</li> <li>3. Employees are trained in proper maintenance, clean-up, and spill response techniques. A sign stating "Clean Up All Spills With Absorbent" is posted at the Waste Oil Storage location.</li> <li>4. A spill kit is kept in the Waste Oil Storage area and a sign indicating its location is posted.</li> <li>5. Outdoor work areas are walked daily for signs of spills or leaks.</li> <li>6. Spills and leaks are cleaned immediately by personnel trained in spill response procedures.</li> </ol>

## Industrial Storm Water Pollution Prevention Plan

Location on- Site	Activity	Pollutant Source	Pollutant	BMPs
	Hazardous Material Storage Container	Leaking containers	Petroleum hydrocarbons, Soaps/surfactants	<ol style="list-style-type: none"> <li>1. Hazardous material stored in designated area.</li> <li>2. Good housekeeping practices in-place.</li> <li>3. Secondary containment structures are provided.</li> <li>4. Employees are trained in proper maintenance, clean-up, and spill response techniques. A sign stating "Clean Up Spills with Absorbent" is posted at the hazardous material storage location.</li> <li>5. A spill kit is kept in the Hazardous Material Storage area and a sign indicating its location is posted.</li> <li>6. Area is inspected daily for signs of spills or leaks.</li> <li>7. Spills and leaks are cleaned immediately by personnel trained in spill response procedures.</li> <li>8. Waste products are recycled whenever possible.</li> </ol>
		Opened containers	Petroleum hydrocarbons, Soaps/surfactants	
		Poor housekeeping or management of containers	Petroleum hydrocarbons, Soaps/surfactants	
Facility-Wide	Plant	Leaking containers	Petroleum hydrocarbons, lead/soaps/surfactants	<ol style="list-style-type: none"> <li>1. Storage area graded to minimize storm water runoff and/or run on.</li> <li>2. Runoff is directed towards depressed areas to allow for settling of silt when possible.</li> <li>3. Drip pans used when draining fluids or storing leaking equipment.</li> <li>4. Equipment leaks repaired as soon as possible.</li> <li>5. Equipment regularly inspected and maintained.</li> </ol>
		Opened containers	Petroleum hydrocarbons, Coolant	
		Poor housekeeping or management of containers	Petroleum hydrocarbons, lead/soaps/surfactants	
		Leaking oil from motor units / lubricants / grease	Petroleum hydrocarbons	<ol style="list-style-type: none"> <li>1. Trash can or container lids are closed at all times.</li> <li>2. Trash container is emptied by a licensed hauler.</li> <li>3. The trash containers are replaced if it is deteriorating to the point where leakage is occurring.</li> <li>4. Good housekeeping practices are practiced to ensure trash is kept inside the trash cans at all times.</li> <li>5. Employees are made aware of the importance of keeping trash containers or bins covered and free from leaks.</li> </ol>
		Heavy metals from rusting equipment	Heavy metals	
		Litter/ Dust / Sediment exposure to storm water and subsequent runoff	Litter, sediment, biodegradable organic materials (i.e., BOD and COD)	
	Entrance/Exit	Sediment exposure to storm water and subsequent runoff	Sediment	<ol style="list-style-type: none"> <li>1. Catch basin, and other drainage features are routinely inspected during both dry and rainy seasons for signs of erosion and excessive sediment.</li> <li>2. Roadways and parking areas are located in low-lying areas to minimize run on and runoff.</li> <li>3. Gravel bags are placed around the catch basin prior to rain events to help prevent sediment from entering.</li> </ol>
		Sediment tracked onto public roadway	Sediment	

### 5.0 ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION

The General Permit requires the performance of an Annual Comprehensive Site Compliance Evaluation (See Appendix B) for each industrial facility. The evaluation must be documented and a copy of the Annual Comprehensive Site Compliance Evaluation must be submitted as part of the Annual Report to the Central Valley Regional Board by July 1<sup>st</sup> of each year.

The evaluation must include:

- ◆ Visual inspection of all potential sources of pollutants that may enter the storm water drainage system via storm water or non-storm water discharges;
- ◆ A review and assessment of all BMPs to determine whether the BMPs are adequate, properly implemented and maintained, or whether additional BMPs are needed;
- ◆ Visual inspection of equipment needed to implement the SWPPP, such as spill response equipment, drip pans, brooms or vacuum sweepers, or containers for used absorbents; and
- ◆ Review of all visual observation records, inspection records, maintenance records, records for draining of secondary containment, and sampling and analysis results.

Documentation of the Annual Comprehensive Site Compliance Evaluation must include:

- ◆ Identification of personnel performing the evaluation;
- ◆ The date(s) of the evaluation;
- ◆ Findings of the evaluation;
- ◆ Recommended modifications of the SWPPP;
- ◆ Schedule for implementing SWPPP revisions; and
- ◆ Any incidents of non-compliance and the corrective actions taken.

Following the evaluation, revisions to the SWPPP and MRP will be completed within 90 days.

## 6.0 MONITORING AND REPORTING PLAN

### 6.1 OBJECTIVES

The General Permit lists four specific objectives to be achieved through storm water monitoring. These objectives, each followed by a more detailed discussion, are:

- a. *Ensure that storm water discharges are in compliance with the Discharge Prohibitions, Effluent Limitations, and Receiving Water Limitations specified in the General Permit.*

The monitoring provisions of the General Permit are intended to support prohibitions of discharge of material other than storm water either directly or indirectly to surface water bodies. Applicable water quality standards for receiving waters<sup>3</sup> are also intended to be achieved through implementation of the monitoring provisions of the General Permit.

- b. *Ensure practices at the facility to reduce or prevent pollutants in storm water discharges and authorized non-storm water discharges are evaluated and revised to meet changing conditions.*

Monitoring is intended to provide information that can eventually be used to reflect changes in storm water discharges that may result from a change in facilities, operational procedures, or materials handled.

- c. *Aid in the implementation and revision of the SWPPP.*

A monitoring plan has three major components that are intended to aid in the implementation of the SWPPP: (1) non-storm water visual observations, (2) storm water discharge visual observations, and (3) storm water sampling and analysis. Non-storm water discharge observations are intended to identify non-storm water discharges that must either be eliminated or verified to be allowable non-storm water discharges. The SWPPP requires a certification that prohibited non-storm water discharges<sup>4</sup> have been eliminated. Storm water discharge visual observations and storm water sampling and analysis are intended to provide an objective measurement of storm water quality. As storm water quality data are accumulated and assessed, the SWPPP may be modified to reflect the conclusions drawn from these data.

- d. *Measure the effectiveness of BMPs to prevent or reduce pollutants in storm water discharges and authorized non-storm water discharges.*

The SWPPP requires implementation of BMPs that are selected on a site-specific basis to reduce storm water pollutants from identified potential sources. Evaluation of sources and selecting BMPs should be performed prior to the wet season. Thus, some decisions are made without the benefit of visual observations and analytical results. In addition, implementation of some BMPs may not result in the anticipated reduction in pollutant concentrations. Analytical and visual monitoring may eventually provide a means for evaluating the effectiveness of selected BMPs. Information gained from analytical data and visual observations may result in improved implementation of BMPs, modification of BMPs in place, or the selection of different BMPs.

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<sup>3</sup> “Applicable water quality standards for receiving waters” are the desired characteristics of surface water bodies that make them acceptable to various uses such as drinking water supply, agricultural supply, navigation, water contact recreation, commercial and sport fishing, wetland habitat, etc.

<sup>4</sup> Also referred to as “unauthorized non-storm water discharges.”

The MRP includes five components: (1) non-storm water discharge visual observations, (2) storm water discharge visual observations, (3) storm water sampling and analysis, (4) recordkeeping, and (5) annual reporting.

### 6.2 NON-STORM WATER DISCHARGE VISUAL OBSERVATIONS

The non-storm water discharge visual observation is an assessment of drainage areas at the San Joaquin Solar 1 & 2 LLC facility for the presence of any authorized or unauthorized non-storm water discharges and their sources. The visual observations required above shall occur quarterly, during daylight hours, on days with no storm water discharges, and during scheduled facility operating hours<sup>5</sup>. Quarterly visual observations shall be conducted in each of the following periods: January-March, April-June, July-September, and October-December. The quarterly visual observations shall be conducted within 6-18 weeks of each other.

The non-storm water discharge visual observations shall document the presence of any discolorations, stains, odors, floating materials as well as the source of any discharge. When inspecting for unauthorized non-storm water discharges, any evidence of prior unauthorized non-storm water discharges shall also be recorded. Records shall be maintained of the visual observation dates, locations observed, the observation, and response taken to eliminate unauthorized non-storm water discharges and to reduce or prevent pollutants from contacting non-storm water discharges. SWRCB Annual Report, Appendix C, includes forms (Forms 2 and 3) to be used for recording authorized and non-authorized non-storm water discharge visual observations.

### 6.3 STORM WATER DISCHARGE VISUAL OBSERVATIONS

The storm water visual observation is a visual, qualitative assessment of the storm water quality of selected discharge locations at the San Joaquin Solar 1 & 2 LLC facility. With the exception of those facilities as described in Section B.4.d. of the General Permit, the storm water discharge visual observations shall be conducted at each storm water sampling location from one storm event per month during the wet season (October 1-May 30). These visual observations shall occur during the first hour of discharge and at all discharge locations. Visual observations of stored or contained storm water shall occur at the time of release. Visual observations are only required of storm water discharges that occur during daylight hours that are preceded by at least three (3) working days without storm water discharges and that occur during scheduled facility operating hours.

Visual observations shall document the presence of any floating and suspended material, oil and grease, discolorations, turbidity, odor, and source of any pollutants. Records shall be maintained of observation dates, locations observed, observations, and response taken to reduce or prevent pollutants in storm water discharges. SWRCB Annual Report, Appendix C, includes a form (Forms 4) to be used for recording authorized and non-authorized non-storm water discharge visual observations.

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<sup>5</sup> "Scheduled facility operating hours" are the time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.

### 6.4 STORM WATER SAMPLING AND ANALYSIS

#### 6.4.1 Storm Water Sampling Location

The General Permit requires that samples be collected from all drainage areas that represent the quality and quantity of the facility's storm water discharges to a surface water body (specifically to “waters of the United States”) from a storm event. The San Joaquin Solar 1 & 2 LLC facility will be assessed to identify representative storm water sampling locations. Storm water discharge locations will be identified which are representative of the quality and quantity of the storm water discharged from the San Joaquin Solar 1 & 2 LLC facility. At this time, the sampling locations are to be determined.

#### 6.4.2 Storm Event Selection Criteria

The General Permit requires that during each wet season (October 1 to April 30), industrial facilities collect and analyze storm water runoff samples from the first storm event and at least one other storm event during the wet season. At a minimum, two storm events must be sampled during each wet season. If sampling is not conducted during the first storm event, the reason must be provided in the Annual Report. For example, if there is no discharge from the catch basin, this should be noted.

Storm water sampling kits are pre-assembled with instructions and sampling equipment and are located in the processing yard's main office. The plant manager is responsible for recognizing a storm event and taking storm water samples. The Site Manager, Environmental Manager and or Team Leaders will act as backup if the Plant Manager is unable to carry out the sampling activities.

In accordance with the General Permit, a facility is only required to collect storm water samples and perform visual observations if storm water discharges commence during scheduled facility operating hours. As previously noted, if there is no discharge from the facility, it is not necessary to sample. Scheduled facility operating hours are defined as “the time periods when the facility is staffed to conduct any function related to industrial activity, but excluding time periods where only routine maintenance, emergency response, security, and/or janitorial services are performed.” The General Permit also requires that at least 3 working days (72 hours) without storm water discharge precede any storm water sampling event. However, the 3 working days may be separated by non-working days such as weekends and holidays, provided that no storm water discharges occurred during the 3 working days and the non-working days. For example, at a facility that does not have scheduled facility hours on Saturday and Sunday, if there is no storm water discharge on Thursday or Friday, no storm water discharge on Saturday and Sunday, and no storm water discharge on Monday, then storm water samples could be collected on Tuesday.

Since samples must be collected within the first hour of runoff, the decision on whether or not to mobilize for sampling a storm event should be based on a weather prediction of the volume and duration of the storm.



### 6.4.3 Storm Water Discharge Analytical Parameters

All industrial facilities with coverage under the General Permit are required to analyze storm water samples for total suspended solids (TSS), pH, specific conductance, and total organic carbon (TOC). However, an analysis for oil and grease (O&G) may be substituted for TOC. The General Permit also requires that laboratory analysis be conducted for toxic chemicals and other pollutants that are likely to be present in storm water discharges in significant quantities<sup>6</sup>. Industrial facilities are also required by the General Permit to have storm water samples analyzed for specified potential constituents based upon the facility Standard Industrial Classification (SIC) code as provided in Table D of the General Permit. Since the SIC code for the San Joaquin Solar 1 & 2 LLC facility is 4911 (1987 SIC) or 221119 (2002 NAICS) – Other Electric Power Generation/ Power Generation, Solar Electric additional sampling analytical parameters are not expected.

Based upon its SIC code and an evaluation of the types and quantities of significant materials used at the facility, location and use of significant materials, and the BMPs implemented, storm water samples collected at the San Joaquin Solar 1 & 2 LLC facility are analyzed for the parameters listed in Table 6-1.

**Table 6-1. Chemical Constituents for Storm Event Sampling**

Analytical Parameter	EPA Method No.	Target Detection Limit	Holding Times (from time of collection)	Sample Preservation Requirements
Conventional Parameters as Required By the General Permit				
Total Suspended Solids (TSS)	160.2	1.0 milligrams per liter (mg/L)	7 days	Cool to 4°C
pH	150.1	pH units	Immediately upon laboratory receipt	Cool to 4°C
Specific Conductance	120.1	micromhos per centimeter (μmhos/cm) units	Immediately upon laboratory receipt	Cool to 4°C
Total Organic Carbon (TOC)	415.1	0.5 mg/L	28 days	Cool to 4°C, phosphoric acid (H <sub>3</sub> PO <sub>4</sub> )
Oil & Grease	413.1	1.0 milligrams per liter (mg/L)		Cool to 4°C
Total Petroleum Hydrocarbons	418.1	1.0 milligrams per liter (mg/L)		Cool to 4°C

## 6.5 SAMPLING PROCEDURES AND EQUIPMENT

### 6.5.1 Grab Sampling

Manual grab samples are collected at the specified sampling point for all monitored storm events. A grab sample is an individual sample collected at one specific site at one point in time. Analysis of a grab sample provides a snapshot of storm water quality. All of the sample bottles provided by the analytical

<sup>6</sup> “Significant quantities” is defined as the volume, concentrations, or mass of a pollutant that can cause or threaten to cause pollution, contamination, or nuisance; adversely impact human health or the environment; and/or cause or contribute to a violation of any applicable water quality standards for the receiving water.



laboratory for the sampling location should be contained within a separate sample cooler. The facility staff responsible for collecting storm water samples should have an equipment box that contains all the equipment and materials necessary for storm water sample collection, other than the sample bottles provided by the analytical laboratory. Appendix E, SWRCB Annual Report, includes the form (Form 1) that should be used for recording the date and time of sample collection and the approximate time that storm water discharge started. When the analytical results are received from the laboratory, Form 1 should be completed with corresponding analytical data.

### 6.5.2 Manual Grab Sampling Procedures

The manual grab sampling procedures are as follows:

- A. The appropriate number of sample containers, sample container labels, blank chain of custody forms, and sample preservation instructions are obtained from the analytical laboratory.
- B. The testing laboratory will receive samples within 48 hours of the physical sampling. The samples are either delivered to or picked up by the laboratory.
- C. Only the sample containers provided by the laboratory to collect and store samples are used. Use of any other type of containers could contaminate the samples.
- D. To prevent sample contamination, the sample containers will not be touched nor will anything be put into them before collecting storm water samples.
- E. The sample containers will not be overfilled. Overfilling can change the analytical results.
- F. The cap for each sample container are tightly screwed without stripping the threads of the cap.
- G. A label is completed and attached to each sample container. The label will identify the date and time of sample collection, the person taking the sample, and the sample collection location or discharge point. The label will also identify any sample containers that have been preserved.
- H. The sample containers are carefully packed into an ice chest. Samples are kept at as close to 4° C (39° F) as possible until arriving at the laboratory. The samples will not be frozen.
- I. A chain of custody form for each set of samples are completed. The chain of custody form shall include the name, address, and phone number of the facility, identification of each sample container and the sample collection point, person collecting the samples, the date and time each sample container was filled, and the analysis that is required for each sample container.
- J. Before shipping, the sample containers are packed to prevent breakage during shipment. Frozen ice packs are placed into the shipping container. The sample containers are kept cool during shipment.
- K. Upon shipping/delivering the sample containers, both the signatures of the persons relinquishing and receiving the sample containers are obtained.
- L. Personnel are designated and trained to collect, maintain, and ship samples in accordance with the above sample protocols and good laboratory practices.

### 6.5.3 Quality Assurance Field Procedures

Manual grab sampling procedures are relatively simple, but it is crucial that no mistakes are made or shortcuts taken. To avoid mistakes that might contaminate samples, the field person must:

- ◆ Wear clean latex or nitrile gloves when handling all sampling equipment, and should change gloves frequently;
- ◆ Collect the sample from the surface of the flow;
- ◆ Secure bottle lids to prevent leakage;
- ◆ Completely and promptly label sample bottles with sample type, location, date, time, and initials;
- ◆ Place filled sample bottles into a cooler and surround each bottle with ice to keep the samples cool and prevent breakage;
- ◆ Do not increase the chance of sample contamination by leaving any sampling equipment or supplies exposed; and
- ◆ Complete the appropriate Chain-of-Custody form and have a second person verify that each bottle in the cooler is listed on the Chain-of-Custody form before submitting the cooler with samples to the analytical laboratory.

### 6.5.4 Clean Sampling Techniques

Clean sampling collection techniques should be followed during the collection of storm water samples to reduce the potential for contamination and permit target analytes to be detected at lower concentrations. Extreme care must be taken during all sampling activities to minimize the exposure of the sample to human, atmospheric, and other source of contamination. Sample collection personnel must adhere to the following rules while collecting storm water samples:

- ◆ No smoking, eating or drinking during sample collection;
- ◆ Do not park vehicles in the immediate sample collection area;
- ◆ Always wear clean, powder-free nitrile or latex gloves when handling sample bottles or equipment;
- ◆ Never touch the inside surface of a sample bottle or lid, even with a gloved hand;
- ◆ Never allow the inside surface of a sample bottle or lid to be touched by any material other than sample water;
- ◆ Do not permit any object to fall into or contact the collected sample water; and
- ◆ Avoid allowing rain water to drip from rain gear or other surfaces into sample bottles.

### 6.5.5 Sample Preservation and Holding Times

Table 6-1, which lists all of the parameters for laboratory analysis, also includes the required sample preservation methods for all analytes in the San Joaquin Solar 1 & 2 LLC facility. Sample preservation typically includes a reduction in temperature and no exposure to sunlight, but may also include the addition of chemical preservatives which are provided by the analytical laboratory. The temperature of all storm water samples should be reduced to 4°C from the time of sample collection until delivery to the analytical laboratory. In the field, manual grab samples collected should be placed on ice in a designated sampling cooler. The ice should be checked regularly to insure that the samples are kept at the proper temperature. Once samples have reached the analytical laboratory, the sample temperature should continue to be held constant at 4°C by reliable refrigeration equipment. In addition to keeping storm

water samples at the proper temperature, it is important to reduce the exposure of the samples to direct sunlight. Sunlight may cause biochemical transformation of the sample resulting in unreliable analytical outcomes. Therefore, samples should be placed in their designated cooler with lid closed immediately. Certain analytes require the addition of chemical preservatives including hydrochloric acid (HCl), sulfuric acid (H<sub>2</sub>SO<sub>4</sub>), or nitric acid (HNO<sub>3</sub>).

The holding times for all analytes are also listed in Table 6-1. For example, the holding time for a sample to be analyzed for TSS is 7 days. It is important that all samples be analyzed within the maximum holding times specified by the laboratory analytical methods. To minimize the risk of exceeding holding time requirements, samples should be transferred to the analytical laboratory as soon as possible after the sample collection has been completed. Therefore, field personnel are responsible for coordinating delivery of the samples to the analytical laboratory so that these holding time limits are not exceeded. If holding times are exceeded, the exceedances must be noted and flagged in the laboratory analytical reports.

### 6.5.6 Chain-of-Custody Forms

Chain-of-Custody forms provided by the laboratory must be filled out by field personnel for all samples submitted to the analytical laboratory. The purpose of the Chain-of-Custody form is to keep a record of the transfer of sample custody and requested analyses. Sample date, sample location and analyses requested should be noted on each Chain-of-Custody form. All analyses specified in the monitoring plan should be included on the Chain-of-Custody form. Laboratory QA/QC requirements, such as laboratory duplicates and matrix spikes, should be noted on the appropriate Chain-of-Custody form as well.

## 6.6 LABORATORY ANALYSIS

Laboratory analyses of storm water samples shall be conducted using the analytical methods in accordance with 40 CFR Part 136, as listed in Table 6-1. The analytical methods for conventional parameters and selected metals are described in the EPA documents *Methods for the Chemical Analysis of Water and Wastes* (EPA 600/4-79-020, 1979) and *Methods for the Determination of Metals in Environmental Samples, Supplement I* (EPA 600/R-94/III, 1994).

## 6.7 REPORTING AND RECORD KEEPING PROCEDURES

All records and information related to the San Joaquin Solar 1 & 2 LLC facility SWPPP and MRP, including laboratory analytical data from storm water samples, are maintained onsite for a period of at least five years from the date of sample, observation, measurement, evaluation, or report. Any non-compliance is reported in accordance with the General Permit requirements. These records or storm water monitoring information shall include:

- ◆ The date, place, and time of facility compliance evaluations, storm water sampling, visual observations, and/or measurements;
- ◆ The individual(s) who performed the site inspections, sampling, visual observations, and or measurements;

- ◆ The date and approximate time of analyses;
- ◆ The laboratory and individual(s) who performed the analyses;
- ◆ Analytical results, method detection limits, the analytical techniques or methods used, and QA/QC records and results;
- ◆ Non-storm water discharge visual observations, non-storm water discharge investigation, and storm water discharge visual observation records;
- ◆ Visual observation and sample collection exception records;
- ◆ All Sampling and Analysis Exemption and Reduction certifications and supporting documentation found at <http://www.swrcb.ca.gov/stormwtr/docs/smanlrdc.doc> for the Sampling and Analysis Reduction Certification form;
- ◆ The records of any corrective actions and follow-up activities that resulted from the visual observations or facility compliance evaluations.

### 6.8 ANNUAL REPORT

The San Joaquin Solar 1 & 2 LLC facility will submit an Annual Report by July 1 of each year to the Executive Officer of the Central Valley Regional Board. The report shall include a summary of visual observations and sampling results, an evaluation of the visual observation and sampling and analysis results, laboratory reports, and the Annual Comprehensive Site Compliance Evaluation Report required in Section A.9 of the General Permit. The method detection limit of each analytical parameter shall be included. Analytical results that are less than the method detection limit shall be reported as "less than the method detection limit." The Annual Report shall be signed and certified in accordance with the Standard Provisions in Section C of the General Permit. The San Joaquin Solar 1 & 2 LLC facility will prepare and submit their Annual Report using the current annual report form developed by the SWRCB (available on the internet and mailed to each facility each year before the due date).

#### 6.8.1 Laboratory Test Results

The results of the laboratory analysis shall be presented in the Annual Report. This would include a comparison of the actual test results and the analytical parameter limits presented in Table 6-1. If all of the test results are below the parameter limits, there is no further explanation necessary. If there are test results that are above a parameter limits, then additional explanation and review is necessary. Explanation details would include:

- Probable or possible pollutant source for each parameter over the limit
- Specific event or activity which caused pollutant discharge (if applicable)
- Proposed BMP to be implemented to prevent repeat discharge
- Proposed changes in activities to prevent repeat discharge (if applicable)

If the test results show repeated discharge levels for the same parameter over multiple seasons or years, then additional analysis or review should be performed to delineate the specific issues involved with the situation.

If a pollutant discharge is due to an accident or disaster, a description of the event including date, time, methods for spill clean-up and other related information would be included into the Annual Report.

Changes or improvements to BMPs and implementation procedures must be documented in the SWPPP at the appropriate sections of the document.

For comparison purposes, the following watershed limits have been included. It is important to update this section annually as watershed management is developed.

**Table 6-2. Detection Limits**

<b>Analytical Parameter</b>	<b>EPA Method No.</b>	<b>Target Detection Limit</b>	<b>Watershed Limit</b>
Total Suspended Solids (TSS)	160.2	1.0 milligrams per liter (mg/L)	45 mg/l
pH	150.1	pH units	6.5 – 8.5
Specific Conductance	120.1	micromhos per centimeter (µmhos/cm) units	<100 µmhos/cm
Total Organic Carbon (TOC)	415.1	0.5 mg/L	Does not have an associated limit
Oil & Grease	413.1	1.0 milligrams per liter (mg/L)	40 mg/l
Total Petroleum Hydrocarbons	418.1	1.0 milligrams per liter (mg/L)	.5 mg/l

## Monitoring and Reporting Plan

The following form may be used to summarize laboratory data results.

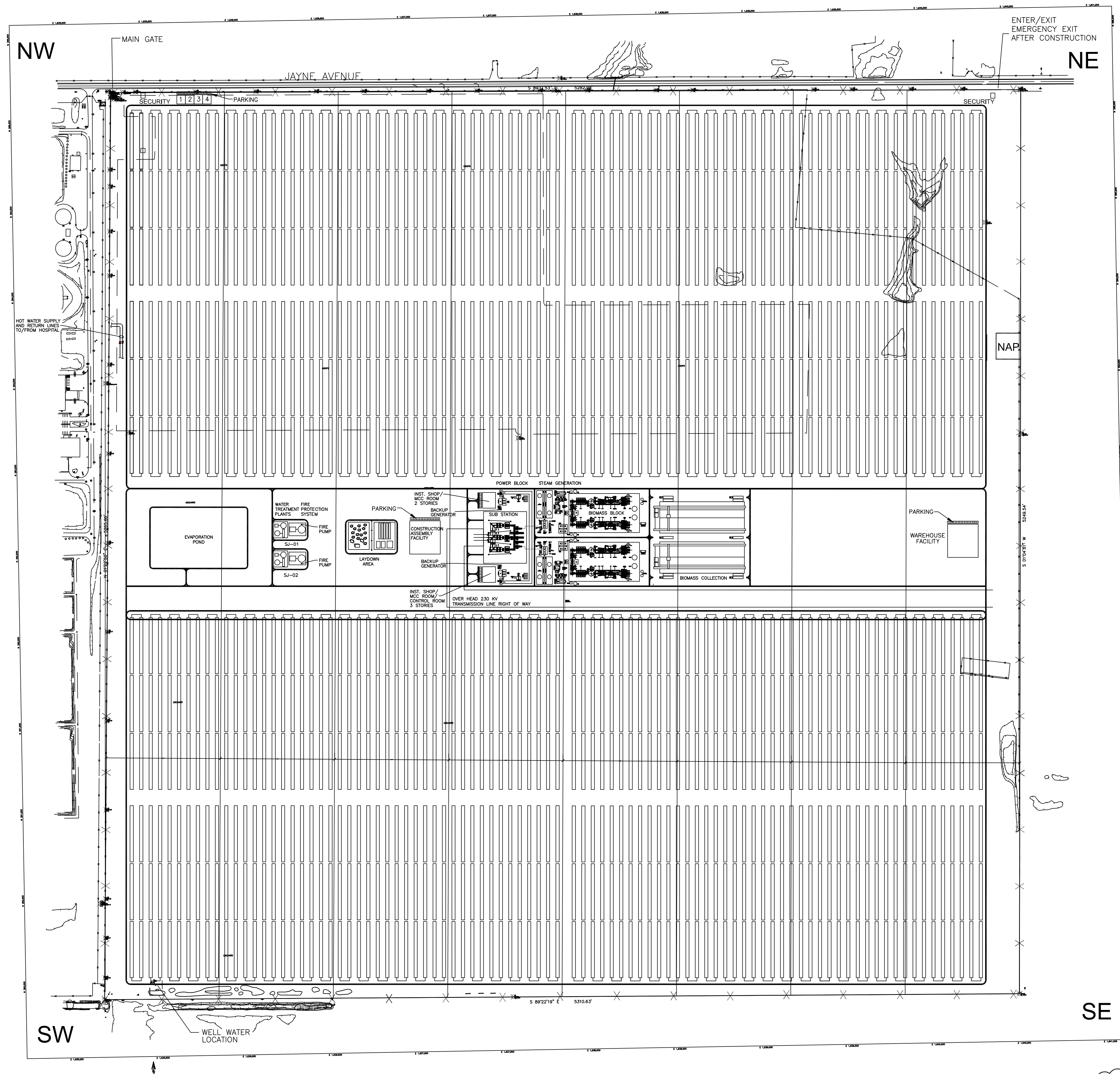
**Table 6-3. Storm Water Quality Data Form**

Constituent Tested	Analytical Method	Units	Sample Date: xx/xx/07 Analytical Results	Sample Date: xx/xx/07 Analytical Results	Sample Date: xx/xx/07 Analytical Results	Sample Date: xx/xx/07 Analytical Results	Sample Date: xx/xx/07 Analytical Results
pH	150.1	pH Units					
Total Suspended Solids /(TSS)	160.2	mg/l					
Specific Conductance (SC)	120.1	umho /cm					
Total Organic Carbon (TOC)	415.1	mg/l					
Oil & Grease	413.1	mg/l					
Total Petroleum Hydrocarbons (TPH)	418.1	mg/l					

Abbreviations: ND = No Detect; NR = Not Reported

**APPENDIX A**  
**SITE MAP**





NOTES:

### LEGEND

- BUILDING 1- VISITOR'S CENTER
- BUILDING 2- GENERAL OFFICES
- BUILDING 3- ADMINISTRATIVE OFFICES
- BUILDING 4- TECHNICAL TRAINING BUILDING

- X — FENCE LINE
- UTILITY ROAD
- NAP NOT PART OF THIS PROJECT
- WELL WATER/ DIESEL ENGINE LOCATION
- DIESEL FUEL TANK LOCATION

REV	DATE	DRWN BY	CHKD BY	APVD BY	DESCRIPTION
A	11/21/08	KRS	GAG	DCG	ISSUED FOR FEL 3 REPORT



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SPINNAKER

OVERALL  
GENERAL ARRANGEMENT

FB&D JOB NUMBER: Z5007  
SCALE: 1"=300'-0"  
DATE: 10/24/2008  
DRAWN BY: K.SCRUGGS

GA-001

REV.  
X

OPEN REVISION  
05/22/09



**APPENDIX B**  
**SWPPP CHECKLIST**

The SWPPP checklist presented on the following pages is a required summary checklist by the State Water Resources Control Board. This checklist has been completed as part of the original SWPPP document. This checklist should be updated with any changes made to the main SWPPP document or plans. Also note that changes are also to be recorded on the Review and Revision sheet found at the beginning of the SWPPP document.

Changes are to be dated and initialed.

**Storm water Pollution Prevention Plan Checklist**  
**General Industrial Activities Storm water Permit**

**FACILITY NAME:**      **San Joaquin Solar 1 & 2 LLC Facility; WDID No. TBD**

FACILITY CONTACT	
Name	
Title	Plant Manager
Company	San Joaquin Solar 1 & 2 LLC
Street Address	
City, State	
Zip	

CONSULTANT CONTACT	
Name	
Title	
Company	
Street Address	
City, State	
Zip	
Phone	

Storm water Pollution Prevention Plan	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Signed Certification (C.9 and C.10)		Follows cover page	
Pollution Prevention Team (A.3.a)		Sec. 2.3, pg. 2-2	
Existing Facility Plans (A.3.b)		Sec. 2-5, pg. 2-6	
Facility Site Map(s)		Appendix A	
Facility boundaries (A.4.a)		Figure 1	
Drainage areas (A.4.a)		Figure 1	
Direction of flow (A.4.a)		Figure 1	
On-site water bodies (A.4.a)	X		
Areas of soil erosion (A.4.a)	X		
Nearby water bodies (A.4.a)	X	Sec. 2.1, p 2-1	
Municipal storm drain inlets (A.4.a)		Figure 1	
Point of discharge (A.4.b)		Figure 1	
Structural control measures (A.4.b)		Figure 1	
Impervious areas (A.4.c) (paved areas, buildings, covered areas, roofed areas)		Figure 1	
Location of directly exposed materials (A.4.d)		Figure 1	
Locations of significant spills and leaks (A.4.d)	X		
Storage areas / Storage tanks (A.4.e)		Figure 1	
Shipping and receiving areas (A.4.e)	X		
Fueling areas (A.4.e)	X		
Vehicle and equipment storage and maintenance (A.4.e)		Sec. 4.3, pp 4-7, 4-8, Figure 1	
Material handling / Material processing (A.4.e)		Figure 1	
Waste treatment / Waste disposal (A.4.e)		Sec. 2.4.5, p 2-4, 2-5, Sec. 4.2, p 4-4, 4-5, Sec. 4.3, p 4-7, 4-8	
Dust generation / Particulate generation (A.4.e)	X		
Cleaning areas / Rinsing areas (A.4.e)		Sec. 4.2, p 4-2, Sec. 4.3, p 4-9	

Storm water Pollution Prevention Plan	Not Applicable	SWPPP Page # or Reference Location	Date Implemented or Last Revised
Other areas of industrial activities (A.4.e)		N/A	
<b>List of Significant Materials (A.5)</b>			
For each material listed:			
Storage location		Table 4-1, pg. 4-1	
Receiving and shipping location		Table 4-1, pg. 4-1	
Handling location		Table 4-1, pg. 4-1	
Quantity		Table 4-1, pg. 4-1	
Frequency		Table 4-1, pg. 4-1	
<b>Description of Potential Pollution Sources (A.6)</b>			
Industrial processes (A.6.a.i)		Sec. 4.2, pg. 4-2	
Material handling and storage areas (A.6.a.ii)		Sec. 4.2, pg. 4-2	
Dust and particulate generating activities (A.6.a.iii)	X		
Significant spills and leaks (A.6.a.iv)	X		
Non-storm water discharges (A.6.a.v)		Sec. 4.2, pg. 4-2	
Soil erosion (A.6.a.vi)	X		
<b>Assessment of Potential Pollutant Sources (A.7)</b>			
Areas likely to be sources of pollutants (A.7.a.i)		Table 4-2, pg. 4-3, 4-4, 4-5, 4-6	
Pollutants likely to be present (A.7.a.ii)		Table 4-2, pg. 4-3, 4-4, 4-5, 4-6,	
<b>Storm water Best Management Practices (A.8)</b>			
<i>Non-structural BMPs (A.8.b)</i>			
Good housekeeping (A.8.a.i)		Sec. 2.4.2, pg. 2-3	
Preventative maintenance (A.8.a.ii)		Sec. 2.4.3, pg. 2-3, 2-4	
Spill response (A.8.a.iii)		Sec. 2.4.6, pg. 2-5, 2-6	
Material handling and storage (A.8.a.iv)		Sec. 2.4.4, pg. 2-4, 2-5	
Employee training (A.8.a.v)		Sec. 2.6, pg. 2-6	
Waste handling / Waste recycling (A.8.a.vi)		Sec. 2.4.5, pg. 2-4, 2-5	
Recordkeeping and internal reporting (A.8.a.vii)		Sec. 6.7, pg. 6-7, 6-8	
Erosion control and site stabilization (A.8.a.viii)		Sec. 4.2, pg. 4-3	
Inspections (A.8.a.ix)		Sec. 6.3, pg. 6-2	
Quality assurance (A.8.a.x)		Sec. 6.5.3, pg. 6-6	
<i>Structural BMPs (A.8.c)</i>			
Overhead coverage (A.8.b.i)		Sec. 4.3, Table 4-2	
Retention ponds (A.8.b.ii)	X		
Control devices (A.8.b.iii)		Sec. 4.3, pg. 4-10	
Secondary containment structures (A.8.b.iv)		Sec. 4.3, Table 4-2	
Treatment (A.8.b.v)			
Industrial Activity BMP/ Pollutant Summary (A.8.d)		Table 4-2	
<b>Annual Comprehensive Site Compliance Evaluation (A.9)</b>			
Review of visual observations inspections, and sampling analysis (A.9.a)		Sec. 5.0, pg. 5-1	
Visual inspection of potential pollution sources (A.9.b)		Sec. 6.2 & 6.3, pg. 6-2	
Review and evaluation of BMPs (A.9.c)		Sec. 6.1, pg. 6-1	
Evaluation report (A.9.d)		Sec. 6.8, pg. 6-8	

**APPENDIX C**  
**ANNUAL COMPREHENSIVE SITE COMPLIANCE EVALUATION FORM**

**Storm Water Management Program**  
**Annual Comprehensive Site Compliance Evaluation**

1. Name of Building or Operation: \_\_\_\_\_

2. Operation Representative: \_\_\_\_\_

Position: \_\_\_\_\_

Phone No.: \_\_\_\_\_

	Not		
	<u>Yes</u>	<u>No</u>	<u>Applicable</u>
3. Facility's Storm water Pollution Prevention Plan (SWPPP) easily accessible in each building?	_____	_____	_____
4. Awareness of SWPPP by facility personnel? (Random survey of employees of site.)	_____	_____	_____
5. Facility's Emergency Response Plan and Procedures easily accessible in each building?	_____	_____	_____
6. Awareness of Emergency Response Plan			
7. And Procedures by facility personnel? (Random survey of employees on site)	_____	_____	_____
8. Evaluation Checklist (page 2 of 2) completed?	_____	_____	_____
9. Was any storm water pollution prevention training conducted during the year?	_____	_____	_____
9. Were non-storm water discharge visual observations conducted? List Dates:	_____	_____	_____
10. Were storm water discharge visual observations conducted? List Dates:	_____	_____	_____
11. Were storm water discharge samples collected for two storm events? List Dates:	_____	_____	_____

Evaluation Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Corrective Measures Recommended: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Evaluation Conducted By: \_\_\_\_\_ Date: \_\_\_\_\_

This completed evaluation was reviewed with me on: \_\_\_\_\_

Date

Operation Representative: \_\_\_\_\_

Signature



## Appendix C

### Evaluation Checklist

Activities – Check each activity present at the site.	Implemented		Corrective Action or comment
	YES	NO	
<b>Equipment Fueling, Repair and Maintenance</b> 1. Monthly inspections of yard for signs of spills. 2. Routine daily walk-throughs checking asphalt storage tank for external corrosion and structural failure, spills and overfills, failure of piping system, and leaks or spills during pumping of asphalt from truck to storage tank. 3. Maintenance performed in designated areas only. 4. Drip pans used when draining fluids or storing leaking equipment. 5. Waste material is managed and disposed of in accordance with applicable waste laws and regulations. 6. Good housekeeping. 7. Personnel trained in proper equipment handling, spill prevention and asphalt transfer and spill response procedures. 8. All spills immediately cleaned by personnel trained in spill response procedures. 9. Clearly labeled clean-up materials strategically placed in the yard. 10. Implement an Emergency Response Plan and Procedures.	<input type="checkbox"/>                      	<input type="checkbox"/>                      	
<b>Hazardous Material Container and Waste Oil Storage</b> 1. Hazard communication program in place. 2. Hazardous material/waste oil stored in designated areas only. 3. Good housekeeping practices in place. 4. Secondary containment structures provided. 5. Employees trained in proper maintenance, cleaning, and spill response procedures. 6. Spill kits kept in both storage areas. 7. Areas inspected daily for signs of spills or leaks. 8. Spills and leaks are cleaned immediately by personnel trained in spill response procedures. 9. Materials recycled whenever possible.	<input type="checkbox"/>                      	<input type="checkbox"/>                      	
<b>Vehicle/equipment and portable storage areas</b> 1. Storage area graded to minimize storm water runoff and/or run on. 2. Drip pans used when draining fluids or storing of leaking equipment. 3. Equipment leaks repaired as soon as possible. 4. Equipment regularly inspected and maintained.	<input type="checkbox"/>    	<input type="checkbox"/>    	



## Appendix C

Activities – Check each activity present at the site.	Implemented		Corrective Action or comment
	YES	NO	
<b>Dumpster</b> 1. Trash can lids are closed at all times. 2. Dumpster lid closed as often as is practical and always during storm events. 3. Dumpster and trash cans emptied by a licensed hauler. 4. Dumpster and trashcans replaced if it is deteriorating to the point where leakage is occurring. 5. Good housekeeping practices to ensure trash is kept inside dumpster at all times. 6. Employees aware of the importance of keeping dumpster covered and free from leaks.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<b>General Site</b> 1. Drainage system, catch basin, and other drainage features are routinely inspected during both dry and rainy seasons.	<input type="checkbox"/>	<input type="checkbox"/>	
<b>Entrance/Exit</b> 1. Sweep the entire parking area of the facility as needed	<input type="checkbox"/>	<input type="checkbox"/>	

**APPENDIX D**  
**ANNUAL REPORT**

NO ANNUAL REPORTS CURRENTLY AVAILABLE FOR THIS DRAFT SWPPP



**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT  
COMMISSION OF THE STATE OF CALIFORNIA  
1516 NINTH STREET, SACRAMENTO, CA 95814  
1-800-822-6228 – [WWW.ENERGY.CA.GOV](http://WWW.ENERGY.CA.GOV)**

**APPLICATION FOR CERTIFICATION  
FOR THE *SAN JOAQUIN SOLAR UNITS 1 AND 2*  
*LICENSING PROJECT***

**Docket No. 08-AFC-12**

**PROOF OF SERVICE**

*(Revised 5/14/2009)*

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**INTERESTED AGENCIES**

California ISO  
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[e-recipient@caiso.com](mailto:e-recipient@caiso.com)

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## **Declaration of Service**

I, Anne Runnalls, declare that on July 15, 2009, I served and filed copies of the attached Draft Storm Water Pollution Prevent Plan. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at: [\[http://www.energy.ca.gov/sitingcases/sjsolar/index.html\]](http://www.energy.ca.gov/sitingcases/sjsolar/index.html). The document has been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

*(Check all that Apply)*

**For service to all other parties:**

  X   sent electronically to all email addresses on the Proof of Service list;

       by personal delivery or by depositing in the United States mail at San Diego, California with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

**AND**

**For filing with the Energy Commission:**

  X   sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);

**OR**

       depositing in the mail an original and 12 paper copies, as follows:

**CALIFORNIA ENERGY COMMISSION**

Attn: Docket No. 08-AFC-12

1516 Ninth Street, MS-4

Sacramento, CA 95814-5512

[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

I declare under penalty of perjury that the foregoing is true and correct.



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Anne Runnalls