California Regional Water Quality Control Board

Los Angeles Region

Linda S. Adams
Cal/EPA Secretary

320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: http://www.waterboards.ca.gov/losangeles

Arnold Schwarzenegger
Governor

December 30, 2009

Mr. Randy Weidner
Project Manager
Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

GENERAL WASTE DISCHARGE REQUIREMENTS (ORDER NO. R4-2007-0019, SERIES NO. 115, MRP NO. CI-9567), INJECTION OF EXTRACTED GROUNDWATER TREATED WITH GRANULATED ACTIVATED CARBON - FORMER SOUTHERN CALIFORNIA EDISON ORMOND BEACH GENERATING STATION, 6635 SOUTH EDISON DRIVE, OXNARD, CALIFORNIA 93033 (FILE NO. 09-185 DTSC LEAD SITE)

Dear Mr. Weidner:

Los Angeles Regional Water Quality Control Board (Regional Board) staff have completed our review of your application for coverage under General Waste Discharge Requirements (WDR) for the injection of extracted groundwater treated with granulated activated carbon (GAC) to remediate 1,4 dioxane in the groundwater beneath your site. We have determined that the proposed discharge meets the conditions specified in Regional Board Order No. R4-2007-0019, *Revised General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel, Volatile Organic Compound and/or Hexavalent Chromium Impacted Sites*, adopted by this Regional Board on March 1, 2007. Please refer to the attached Fact Sheet.

You may begin to inject a maximum of 20 gallons per minute of extracted groundwater that has been remediated by passage through a two-stage granulated activated carbon (GAC) treatment system, with the injected fluid having a 1,4-dioxane concentration of below 0.5 micrograms per liter. GAC-treated groundwater will be injected into the maximum 36-inch deep by 36-inch wide by 100 feet long leach field where it will percolate through an infiltration gallery comprised of ¾-inch to 2½-inch gravel, as indicated in Figure 2-3 of Appendix 2 of the September 2009 *Project Application Document, Proposed Pump and Treat System.* The site Closure Plan (date unspecified), was approved by the California Department of Toxic Substances Control (DTSC), the lead-agency for the site, in correspondence dated June 23, 2009.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2007-0019 (Series 185) and Monitoring and Reporting Program (MRP) No. CI-9567. Please note that the discharge limits in Attachment B [DWR Basin No. 4-4 (Oxnard Plain – Unconfined and Perched Aquifers)] of this Order No. R4-2007-0019 are applicable to your discharge.

The "Monitoring and Reporting Program" requires you to implement the monitoring program on the effective date of this enrollment (December 30, 2009) under Regional Board Order No. R4-2007-0019. All monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit.

To avoid paying future annual fees, please submit a written request for termination of your enrollment under the general permit in a separate letter, when your project has been completed and the permit is no longer needed. Be aware that the annual fee covers the fiscal year billing period beginning July 1 and ending June 30, the following year. You will pay the full annual fee if your request for termination is made after the beginning of the new fiscal year beginning July 1.

When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to "Compliance File No. CI-9567", which will assure that the reports are directed to the appropriate file and staff. Also, please do not combine other reports with your WDR monitoring reports. Submit each type of report as a separate document.

Should you have any questions, please contact Dr. Rebecca Chou at (213) 620-6156.

Sincerely,

Samuel Unger A.E.O. for

Tracy J. Egoscue
Executive Officer

Enclosures:
1) Fact Sheet
2) General Waste Discharge Requirements, Order No. R4-2007-0019
3) Monitoring and Reporting Program, CI No. 9567

cc: Ms. Christine Bucklin, Department of Toxic Substances Control (cbucklin@dtsc.ca.gov)
Ms. Tanya Bilazikjian, RBF Consulting (tbilazikjian@rbf.com)

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
320 West 4th Street, Suite 200, Los Angeles, California 90013

FACT SHEET
WASTE DISCHARGE REQUIREMENTS
FOR
FORMER SOUTHERN CALIFORNIA EDISON
ORMOND BEACH GENERATING STATION, OXNARD

INJECTION OF EXTRACTED GROUNDWATER TREATED WITH GRANULATED ACTIVATED CARBON

ORDER NO. R4-2007-0019 (Series No. 115)
CI-9567, FILE NO. 09-185

FACILITY ADDRESS
6635 South Edison Drive
Oxnard, CA 93033
Latitude 34° 07' 48.6" N
Longitude 119° 10' 47.5" W

FACILITY CONTACT MAILING ADDRESS
Mr. Randy Weidner, Project Manager
Southern California Edison
2244 Walnut Grove Avenue
Rosemead, CA 91770

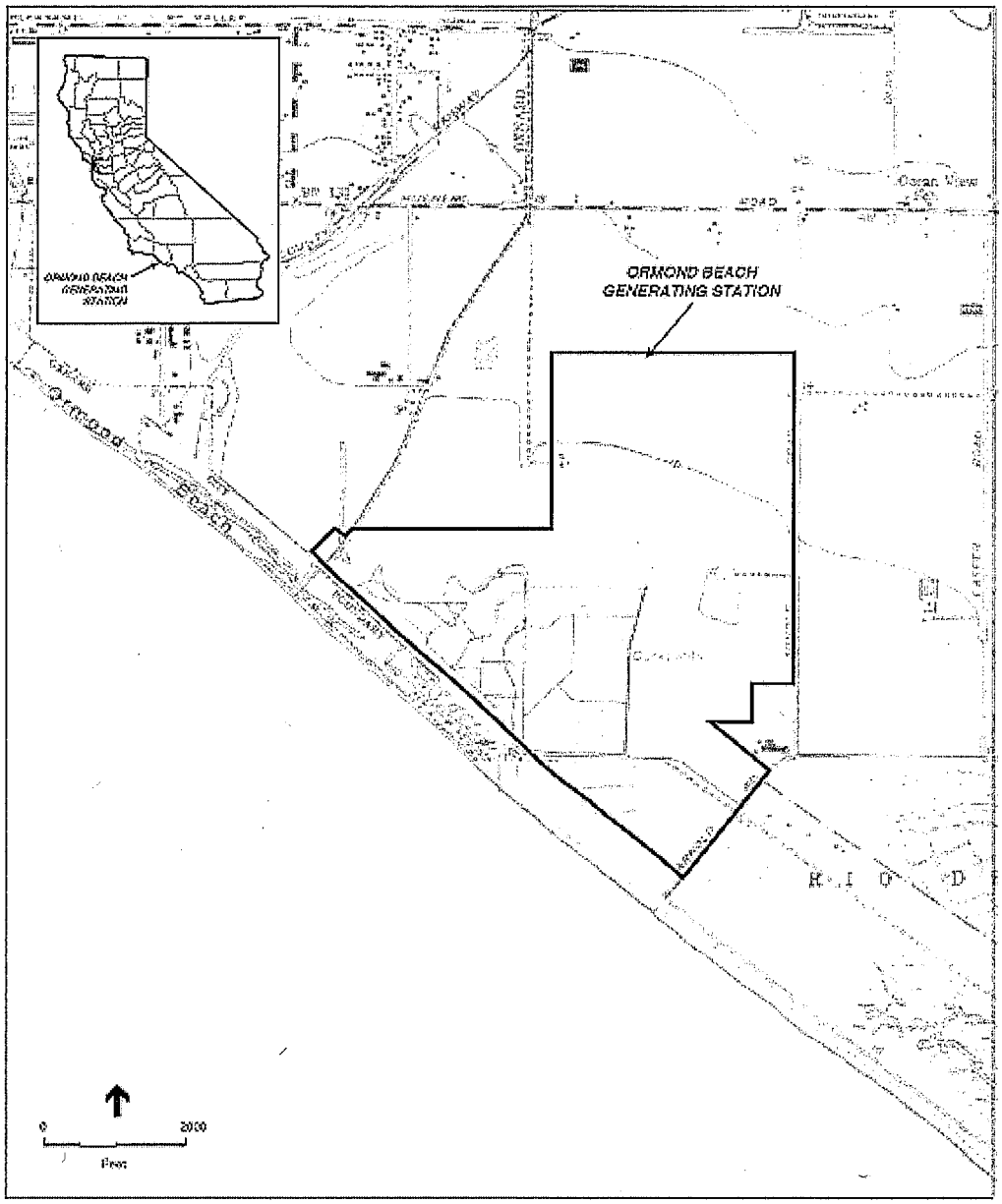
PROJECT DESCRIPTION:

The former Southern California Edison Ormond Beach Generating Station site measures approximately 37 acres of a 693-acre industrial site along the Pacific Ocean, approximately 2.5 miles southeast of Port Hueneme, and is operated by RRI Energy Company as an electrical generating power plant consisting of two natural-gas-fired generating units with a combined capacity of 1516 megawatts. The property is owned by RRI Energy Company. A site vicinity map is shown in Figure 1, and a site map is shown in Figure 2. The facility has been in operation at the site from 1959 until the present.

Groundwater contamination encountered at the site includes 1,4-dioxane at concentrations up to 36 micrograms per liter (µg/L) in groundwater. Tables 1 through 3 summarize the historic concentrations of 1,4-dioxane detected in monitoring wells installed at the site. The contaminant releases at the site were associated with the storage of acidic boiler chemical cleaning waste in two on-site wastewater retention basins located near the southwestern corner of the property.

The site is approximately 10 feet above mean sea level. Groundwater occurs approximately 6 feet below ground surface (bgs) and is unconfined. Soil beneath the site is dominated by gray, coarse-grained sand with thin silt and clay layers. The hydraulic conductivity of the aquifer beneath the site was calculated to be 4.2×10^{-2} centimeters per second.

A groundwater pump and treat system will extract groundwater contaminated with 1,4-dioxane from beneath the site and will pipe it to a two-stage granulated activated carbon (GAC) treatment system. Treated groundwater will then be piped to a leach field where it will percolate through a maximum 36-inch deep by 36-inch wide by 100 feet long infiltration gallery (Figure 2) comprised of ¾-inch to 2½-inch gravel.



SOURCE: Environmental Science Associates

Divestiture of Electric Generation Assets I.97.01.10 ■

Figure 1.

Location of the Ormond Beach Generating Station

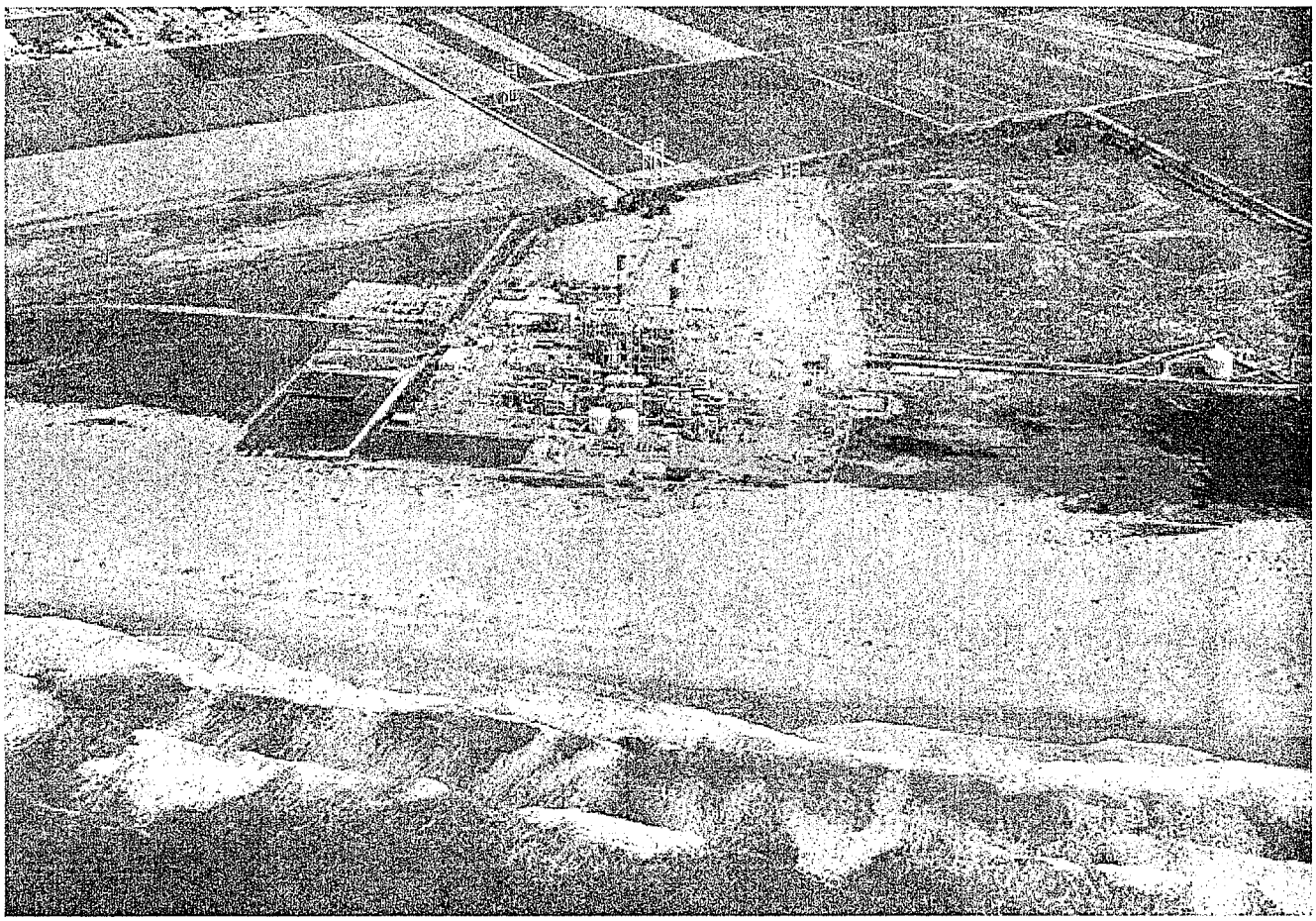
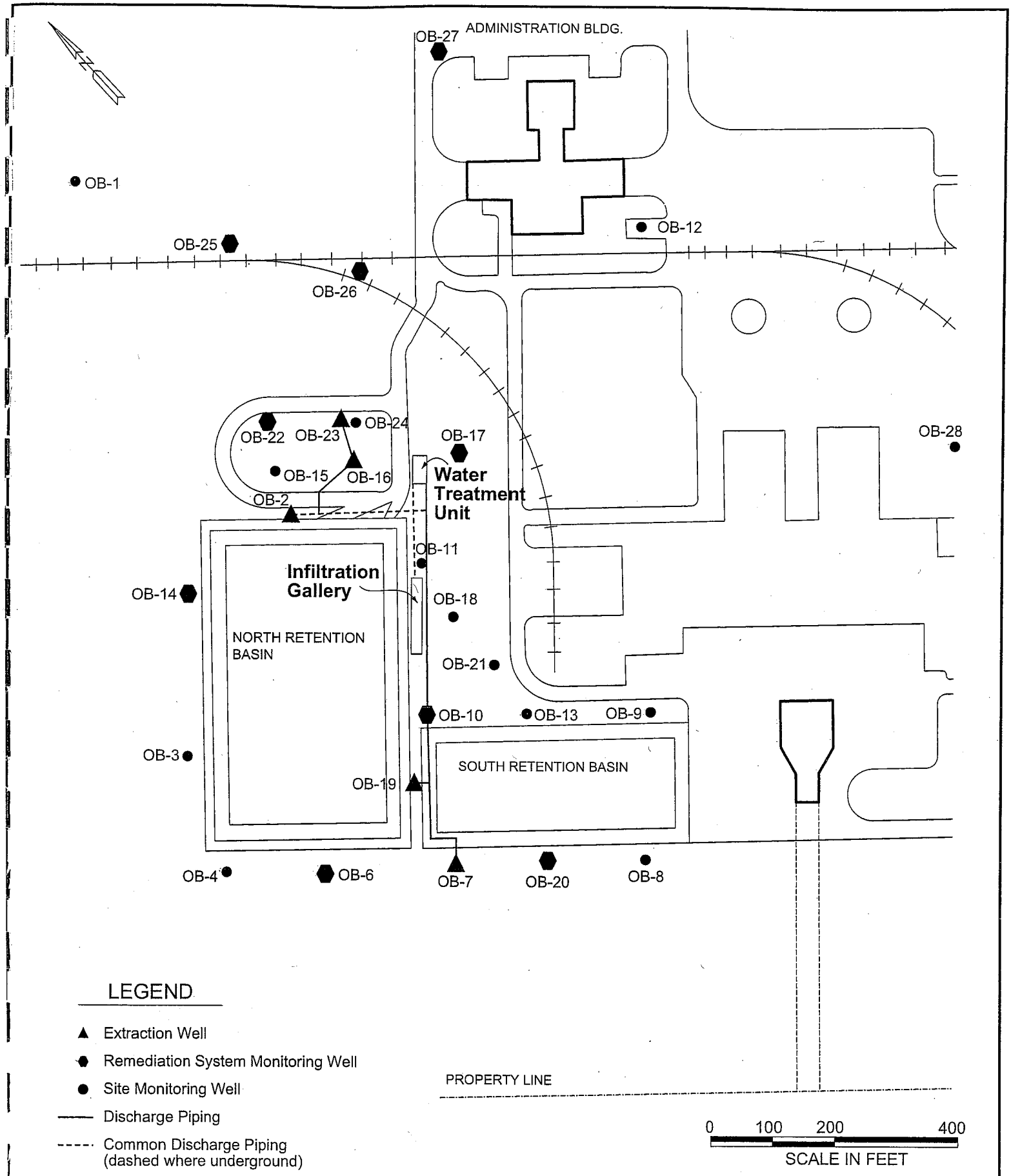


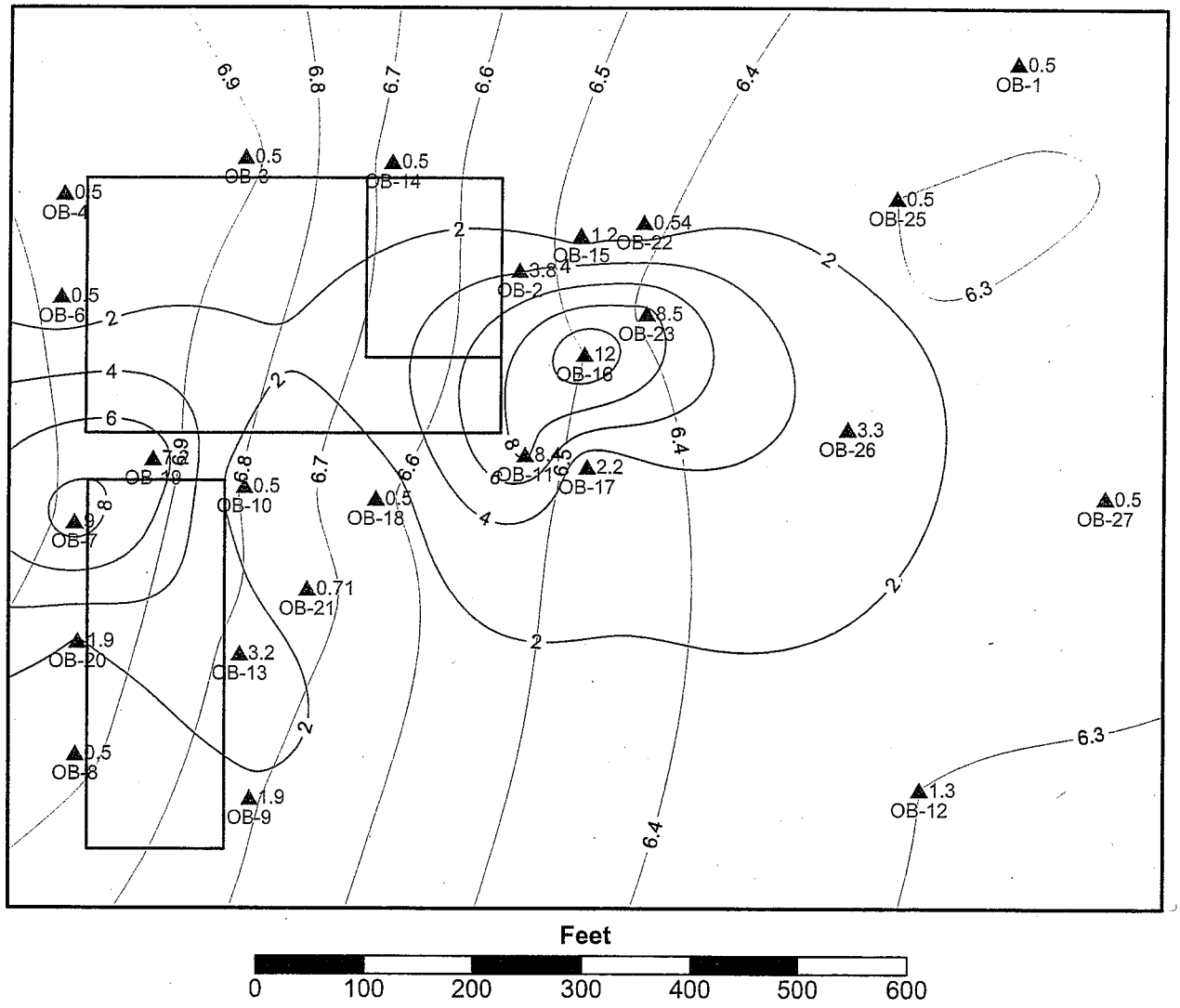
Fig 1a. Aerial View of Ormond Beach Generating Station



SOUTHERN CALIFORNIA EDISON®
An EDISON INTERNATIONAL® Company

REMEDIATION SYSTEM
GROUNDWATER REMEDIATION PROJECT
ORMOND BEACH GENERATING STATION
FIGURE 2

June 22, 2009



Contour Interval = 0.1 foot

▲ **Location of Groundwater Monitoring Well**
1,4-Dioxane Concentration is Posted Above the Location

1,4-Dioxane Contour Interval = 2 ug/l

PQL = 0.5 ug/l

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1,4-DIOXANE ISOCONCENTRATION PLOT
GROUNDWATER REMEDIATION PROJECT
ORMOND BEACH GENERATING STATION
FIGURE 3

TABLE 1

Background Groundwater Quality							
Parameters	**RL**	**Units**	**Well Identification**				
			OB-2	**OB-9**	**OB-16**	**OB-19**	**OB-23**
pH			7.18	7.26	7.56	6.98	7.51
TDS	10	mg/L	13,000	4,600	7,600	6,400	8,800
Temperature		°C	19.3	19.7	17.4	17.7	18.84
Dissolved O_2		mg/L	0.49	0.25	0	0.49	0
CO_2 (aqueous)	5	mg/L	172	64.7	60.4	190	61.6
ORP		mV	14	5.4	-12.5	7.2	-10
Chlorides	25	mg/L	5,600	1,100	3,300	2,200	3,800
Sulfates	25	mg/L	2,000	1,500	1,300	1,600	1,300
Nitrogen	0.1	mg/L	11	3.4	6.5	8.4	4.2
NO_2+NO_3 as N	0.1	mg/L	3.3	1.0	0.77	0.62	ND
Ammonium	0.2	mg/L	3.6	3.4	4.2	5.6	2.7
Phosphorus	0.01	mg/L	0.17	0.057	3.2	0.73	2.9
Potassium	0.1	mg/L	140	45	140	63	160
TKN	0.1	mg/L	7.6	2.3	6.5	8.4	4.2
Iron, (total)	0.01	mg/L	0.072	2.2	9.2	24	5.8
BOD	2	mg/L	ND	ND	ND	2.5	ND
COD	5	mg/L	580	16	54	45	13
Methane	1	µg/L	40	120	210	59	160
Metals (dissolved)		µg/L					
Aluminum	25	µg/L	ND	ND	ND	ND	ND
Antimony	2.5	µg/L	ND	ND	ND	ND	ND
Arsenic	2	µg/L	ND	ND	ND	2.2	5
Barium	2.5	µg/L	38	44	17	64	85
Beryllium	0.5	ug/L	ND	ND	ND	ND	ND
Cadmium	0.5	µg/L	1	ND	ND	ND	ND
Chromium	1	µg/L	ND	ND	ND	ND	ND
Cobalt	0.5	µg/L	5.2	0.85	ND	ND	ND

TABLE 1, continued

Copper	2.5	µg/L	ND	ND	ND	ND	ND
Iron	10	µg/L	48	57	24	14,000	270
Lead	1	µg/L	ND	ND	ND	ND	ND
Manganese	5	µg/L	1,900	2,500	700	2,700	970
Mercury	0.05	µg/L	ND	ND	ND	ND	ND
Molybdenum	0.5	µg/L	34	28	40	23	40
Nickel	4	µg/L	13	ND	ND	ND	ND
Selenium	2	µg/L	6.2	ND	ND	ND	ND
Silver	1	µg/L	ND	ND	ND	ND	ND
Thallium	1	µg/L	ND	ND	ND	ND	ND
Vanadium	2.5	µg/L	ND	ND	ND	ND	ND
Zinc	25	µg/L	ND	ND	ND	ND	ND

TABLE 2

1,4-Dioxane Groundwater Data						
Date	PQL (µg/L)	Well Identification				
		OB-2	OB-9	OB-16	OB-19	OB-23
3/00	2	6.2	5.8	--	--	--
9/00	2	3	7	7.9	6.7	--
12/00	2	5.6	8.9	16	4.4	--
3/01	0.5	7	6.2	10	6.6	--
6/01	0.5	7.5	7.1	16	6.1	--
9/01	0.5	4.4	6.7	14	3.8	--
12/01	0.5	5.4	6.6	16	1.9	--
3/02	0.5	17	6.5	14	1.5	--
6/02	0.5	9.6	5.9	16	5.1	--
9/02	0.5	6	5.7	14	3.3	--
12/02	0.5	2.7	3.3	7.4	ND	6.5
3/03	0.5	7.8	5.6	8.8	ND	7.6
6/03	0.5	9.5	6.6	13	1.3	9.5
9/03	0.5	2.4	2	4.4	ND	4.1
1/04	0.5	2	6.2	14	1.6	15
3/04	0.5	14	8.5	10	0.75	13
6/04	0.5	12	7	13	2.7	12
9/04	0.5	11	0.72	9.9	2.9	13
12/04	0.5	6.2	7	9.1	2.9	21
3/05	0.5	10	5	8.7	ND	21
6/05	0.5	11	5.9	15	ND	36
9/05	0.5	13	5.1	18	1.6	21
12/05	0.5	11	5.6	16	1.5	25
3/06	0.5	14	5.6	2.7	2.2	7.2
6/06	0.5	14	5.6	13	0.65	26
9/06	0.5	6.2	4.8	18	2.3	19
12/06	0.5	5.4	5.2	20	6.5	23
3/07	0.5	6.6	4.3	11	3.9	17
6/07	0.5	4.7	3.4	11	10	12
9/07	0.5	4.7	2.6	14	18	14
12/07	0.5	4	3.6	13	34	11
3/08	0.5	7.9	3.3	7.8	ND	7.3
6/08	0.5	4.5	1.4	11	9	8.8
9/08	0.5	4	2.3	14	12	9.8
12/08	0.5	9.4	ND	9.4	11	6.8
3/09	0.5	13	2.7	7.7	3.5	4.7

TABLE 3

1,4-Dioxane Concentration Statistics (Tbl. 2 Data)						
Statistic	**Well Identification**					**All Wells**
	OB-2	**OB-9**	**OB-16**	**OB-19**	**OB-23**	
Avg. [C]	7.9	5.1	12.1	4.8	14.3	8.7
Min. [C]	2.0	0.7	2.7	ND	4.1	ND
Max. [C]	17	8.9	20	34	36	36
Median [C]2	6.8	5.6	13	1.9	12.5	7.0

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-9558
FOR
FORMER SOUTHERN CALIFORNIA EDISON
ORMOND BEACH GENERATING STATION, OXNARD

6635 SOUTH EDISON DRIVE
OXNARD, CALIFORNIA

ORDER NO. R4-2007-0019 (Series No. 115)
FILE NO. 09-185,

I. Monitoring and Reporting Requirements

A. Southern California Edison (hereinafter Discharger) shall implement this monitoring program on the effective date of this enrollment (December 30, 2009) under Regional Board Order No. R4-2007-0019. Upon the initiation of monthly groundwater monitoring and sampling, the first monitoring report shall be submitted by **May 15, 2010** for the first three months (January 2010 through March 2010) of this remediation program. Subsequent quarterly monitoring reports shall be received by the Regional Board according to the following schedule:

Monitoring Period	Report Due
January – March	May 15
April – June	August 15
July – September	November 15
October – December	February 15
Annual Summary Report	February 15 of each year beginning in 2011

B. If there is no discharge or injection, during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.

C. By February 15 of each year, starting in 2011, the Discharger shall submit an annual summary report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous calendar year. In addition, the Discharger shall discuss the compliance record and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements.

D. The Discharger shall comply with requirements contained in Section G. of Order No. R4-2007-0019 "*Monitoring and Reporting Requirements*" in addition to the aforementioned requirements.

II. Discharge Monitoring

Prior to the start of injection of treated groundwater to the infiltration system, the Discharger shall sample from the following groundwater monitoring wells for baseline groundwater parameters:

- up-gradient wells OB-6, OB-10, and OB-20;
- down-gradient wells OB-12, OB-17, OB-22, OB-25, OB-26, and OB-27;
- cross-gradient wells OB-14, OB-22, and OB-18;
- cross-gradient/injection zone well OB-18, and;
- down-gradient/injection zone well OB-11.

Following the collection of baseline groundwater samples, all of the above-listed up-gradient, down-gradient, cross-gradient, and injection zone wells shall be monitored for the life of the injection of treated groundwater to the infiltration system in accordance with the following discharge monitoring program:

LABORATORY ANALYSES

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
1,4 Dioxane (EPA Method 8270M)	µg/L	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter
Major Anions (bromide, chloride, sulfate, nitrate, nitrite, O-phosphate, and sulfide)	µg/L	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter
Major Cations (barium, calcium, magnesium, manganese, potassium and sodium)	µg/L	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter
Ferrous Iron, Manganese, Arsenic, Lead	µg/L	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter

FIELD PARAMETERS

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total Dissolved Solids and Total Suspended Solids	mg/L	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter
Specific Conductivity	µmhos/cm	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter
pH	pH units	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter

FIELD PARAMETERS (CONT)			
Oxidation-Reduction Potential	millivolts	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter
Temperature	°F/°C	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter
Dissolved Oxygen	µg/L	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter
Turbidity	NTU	grab	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter
Groundwater Elevation	Feet, mean sea level (msl) and below ground surface (bgs)	in-situ	• Baseline prior to discharge • Monthly first month through third month • Quarterly thereafter

Footnotes:

1) Groundwater elevation data shall be collected from all monitoring wells at the site during each monitoring event and a groundwater potentiometric surface map shall be created from the monthly and quarterly data and provided in the monitoring reports.

III. CERTIFICATION STATEMENT

Each report shall contain the following completed declaration:

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

Executed on the _____day of _____

at _____

_____ (Signature)

_____ (Title)"

IV. MONITORING FREQUENCIES

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations dropped by the Executive Officer if the Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.

All records and reports submitted in compliance with this Order are public documents and will be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region, upon request by interested parties. Only proprietary information, and only at the request of the Discharger will be treated as confidential.

Ordered by: Samuel Unger A.E.O. for Date: December 30, 2009

Tracy J. Egoscue
Executive Officer