

# Final Environmental Impact Report

Volume I: Comments on Draft EIR and Responses

## Comprehensive Groundwater Cleanup Strategy for Historical Chromium Discharges from PG&E's Hinkley Compressor Station, San Bernardino County



Image: Google Inc. 2012. Google Earth Pro, Version 6.1. Mountain View, CA. Accessed July 31, 2012.

*View of Hinkley looking northeast from the Mojave River.*

**April 2013**

Prepared by ICF International for the  
California Regional Water Quality Control Board,  
Lahontan Region





# **FINAL ENVIRONMENTAL IMPACT REPORT**

## **VOLUME I: COMMENTS ON DRAFT EIR AND RESPONSES**

### **COMPREHENSIVE GROUNDWATER CLEANUP STRATEGY FOR HISTORICAL CHROMIUM DISCHARGES FROM PG&E'S HINKLEY COMPRESSOR STATION, SAN BERNARDINO COUNTY**

#### **PREPARED FOR:**

California Regional Water Quality Control Board, Lahontan Region  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, CA 96150-7704  
Contact: Lisa Dernbach, Senior Engineering Geologist  
530.542.5400

#### **PREPARED BY:**

ICF International  
620 Folsom Street, Suite 200  
San Francisco, CA 94107  
Contact: Rich Walter  
415.677.7100

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# 1 Acronyms and Abbreviations

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2	µg/L	microgram per liter
3	µg/m <sup>3</sup>	micrograms per cubic meter
4	238U	Uranium
5	AADT	average annual daily traffic
6	AB	Assembly Bill
7	ACEC	Areas of Critical Environmental Concern
8	ACHP	the Advisory Council on Historic Preservation
9	ADT	average daily traffic
10	af	acre-feet
11	afy	acre-feet per year
12	AG	Agriculture
13	AG-AP	Agricultural Preserve overlay
14	AGR	agricultural supply
15	Albion	Albion Environmental Inc.
16	Alquist-Priolo Act	Alquist-Priolo Earthquake Fault Zoning Act
17	AMS	Accelerator Mass Spectrometry
18	amsl	above mean sea level
19	AQUA	aquaculture
20	ARB	California Air Resources Board
21	ATSDR	Agency for Toxic Substances and Disease Registry
22	ATSF	Atchison, Topeka & Santa Fe Railway
23	AU	agricultural units
24	bgs	below ground surface
25	BLM	U.S. Bureau of Land Management
26	BMPs	Best Management Practices
27	BNSF	Burlington, Northern & Santa Fe Railway
28	BSCF	brake specific fuel consumption
29	BSSC	Building Seismic Safety Council
30	Business Plans	Hazardous Materials Release Response Plans and Inventory
31	BWh	dry-hot desert climate
32	BWhh	dry-very hot desert
33	CAA	federal Clean Air Act
34	CAAQS	California ambient air quality standards
35	CAC	Community Advisory Committee
36	CAL FIRE	California Department of Forestry and Fire Protection
37	Cal-EPA	California Environmental Protection Agency
38	Cal-OSHA	California Occupational Safety and Health Administration
39	Caltrans	California Department of Transportation
40	CAO	Cleanup and Abatement Order



1	CAP	Climate Action Plan
2	CAPCOA	California Air Pollution Control Officers Association
3	CBC	California Building Code
4	CBC	California Building Code
5	CCAA	California Clean Air Act
6	CCAs	community choice aggregators
7	CCR	California Code of Regulations
8	CDFG	California Department of Fish and Game
9	CDPH	California Department of Public Health
10	CEQA	California Environmental Quality Act
11	CERCLA	Comprehensive Environmental Response, Compensation and
12		Liability Act of 1980
13	CESA	California Endangered Species Act
14	CG	General Commercial
15	CGS	California Geological Survey
16	CH <sub>4</sub>	methane
17	CHLs	California Historical Landmarks
18	CHP	Combined Heat and Power
19	CHRIS	California Historical Resources Information System
20	CN	neighborhood commercial
21	CNDDDB	California Natural Diversity Database
22	CNEL	community noise equivalent level
23	CNG	compressed natural gas
24	CNPS	California Native Plant Society
25	CO	carbon monoxide
26	CO <sub>2</sub>	carbon dioxide
27	CO <sub>2</sub> e	carbon dioxide equivalents
28	County	San Bernardino County
29	CPUC	California Public Utility Commission
30	Cr	chromium
31	Cr[T]	total chromium
32	Cr[VI]	hexavalent chromium
33	CRHR	California Register of Historic Resources
34	CRP	Coating Restriction Plan
35	CRPR	California Rare Plant Rank
36	CUPA	Certified Unified Program Agency
37	CWA	Clean Water Act
38	dB	decibel
39	dBA	A-Weighted Decibel
40	DEHP	di 2-ethylhexyl phthalate
41	DNL	Day-Night Level
42	DOT	federal Department of Transportation

1	DPM	diesel particulate matter
2	DPT	Direct-Push Technology
3	DTSC	California Department of Toxic Substances Control
4	DVD	Desert View Dairy
5	DVD	Desert View Dairy
6	DWMAs	Desert Wildlife Management Areas
7	EC	electrocoagulation
8	ECSZ	Eastern California Shear Zone
9	EHIB	Environmental Health Investigations Branch
10	EIR	Environmental Impact Report
11	EIS	Environmental Impact Statement
12	EPA	United States Environmental Protection Agency
13	ESA	federal Endangered Species Act
14	ESPs	energy service providers
15	FEMA	Federal Emergency Management Agency
16	FMMP	Farmland Mapping and Monitoring Program
17	FONSI	Finding of No Significant Impact
18	FPA	free production allowance
19	FPPA	Farmland Protection Policy Act
20	FRSH	freshwater replenishment
21	FS	The 2010 Feasibility Study
22	ft/ft	feet per foot
23	FWARG	Far Western Anthropological Research Group
24	g	gravity
25	g/bhp-hr	grams per brake horsepower-hour
26	General Permit	General Waste Discharge Requirements Permit
27	GFH	granular ferric hydroxide
28	GHG	greenhouse gas
29	GMP	groundwater monitoring reports
30	gpd	gallons per day
31	gpm	gallons per minute
32	GPS	global positioning system
33	GVWR	gross vehicle weight rating
34	GWP	global warming potential
35	HAP	hazardous air pollutants
36	HASP	Health and Safety Plan
37	HCFCs	halogenated chlorofluorocarbons
38	HCP	Habitat Conservation Plan
39	HDPE	High-density polyethylene
40	HFCs	hydrofluorocarbons
41	HRA	Health Risk Assessment
42	HSAA	Carpenter-Presley-Tanner Hazardous Substances Account Act

1	HUD	U.S. Housing and Urban Development
2	HWCL	California Hazardous Waste Control Law
3	Hwy 58	State Highway 58
4	I-15	Interstate 15
5	IBC	International Building Code
6	ICES	Intermodal Corridors of Economic Significance
7	IND	industrial service supply
8	IOUs	investor-owned utilities
9	IPaC	Information, Planning and Conservation System
10	IPM	integrated pest management
11	IR	Regional Industrial
12	IRP	Independent Review Panel
13	IRZ	in-situ reduction zones
14	ITP	Incidental Take Permit
15	kWh	kilowatts per hour
16	LCFS	Low Carbon Fuel Standard
17	$L_{dn}$	day-night sound level
18	$L_{eq}$	equivalent sound level
19	lf	linear feet
20	LLNL	Lawrence Livermore National Laboratory
21	$L_{max}$	maximum sound levels
22	$L_{min}$	minimum sound levels
23	LOS	level of service
24	LTUs	land treatment units
25	LUST	leaking underground storage tank
26	$L_{xx}$	percentile-exceeded sound levels
27	MBfRs	Membrane Biofilm Reactors
28	MBTA	Migratory Bird Treaty Act
29	MCE	maximum credible earthquake
30	MCL	Maximum Contaminant Level
31	MDAB	Mojave Desert Air Basin
32	MDAQMD	Mojave Desert Air Quality Management District
33	mg/L	milligram per liter
34	mgd	million gallons per day
35	MLDs	most likely descendants
36	MMP	mitigation monitoring program
37	MND	mitigated negative declarations
38	Mojave Solar	Mojave Solar, LLC
39	mpg	miles per gallon
40	MSAT	mobile source air toxics
41	msl	above mean sea level
42	MT	metric tons

1	MUN	municipal and domestic supply
2	MW	megawatt
3	MWA	Mojave Water Agency
4	N <sub>2</sub> O	nitrous oxide
5	NAAQS	national ambient air quality standards
6	NAHC	Native American Heritage Commission
7	NDMA	N-nitrosodimethylamine
8	NEPA	National Environmental Policy Act of 1969 as amended
9	ng/L	nanogram per liter
10	NHPA	National Historic Preservation Act
11	NIRS	National Inorganic and Radionuclide Survey
12	NO <sub>2</sub>	nitrogen dioxide
13	Non-Degradation Policy	Statement of Policy with Respect to Maintaining High Quality of
14		Waters in California
15	NOP	Notice of Preparation
16	NPDES	National Pollution Discharge Elimination System
17	NRCS	Natural Resources Conservation Service
18	NRHP	National Register of Historic Places
19	nZVI	Nanoscale zero valent iron
20	O&M	operation and maintenance
21	O <sub>3</sub>	ozone
22	OEHHA	Office of Environmental Health Hazard Assessment
23	OIMP	Odor Impact Mitigation Plan
24	ORP	oxidation-reduction potential
25	OSHA	federal Occupational Safety and Health Administration
26	OU	Operable Unit
27	Pb	lead
28	PCB	polychlorinated biphenyls
29	pCi/L	picoCurie per liter
30	Peak Velocity	Peak Particle Velocity
31	PFCs	perfluorinated carbons
32	PG&E	Pacific Gas and Electric Company
33	PHA	public health assessment
34	PHG	Public Health Goal
35	PM	particulate matter
36	PM10	PM 10 microns in diameter or less
37	PM2.5	PM 2.5 microns in diameter or less
38	Porter-Cologne Act	Porter-Cologne Water Quality Control Act of 1967
39	ppb	parts per billion
40	ppm	parts per million
41	ppt	parts per trillion
42	ppv	peak particle velocity

1	PRBs	Permeable Reactive Barriers
2	PRC	Public Resources Code
3	Program	Voluntary Whole House Replacement Water Program
4	PVC	Polyvinyl chloride
5	RCRA	Resource Conservation and Recovery Act of 1974
6	Resolution 92-49	Resolution 92-49, Policies and Procedures for Investigation and
7		Cleanup and Abatement of Discharges Under Water Code Section
8		13304
9	RL	Rural Living
10	ROGs	reactive organic gases
11	RPS	California's Renewable Portfolio Standard
12	RS	Single Residential
13	RWQCB	Regional Water Quality Control Board
14	SAA	Streambed Alteration Agreement
15	SANBAG	San Bernardino Associated Governments
16	Santa Fe Railroad	Atchison, Topeka & Santa Fe Railroad line
17	SARA	Superfund Amendments and Reauthorization Act of 1986
18	SB	Senate Bill
19	SBA	Strong-Base Anion
20	SBAIC	San Bernardino Archaeological Information Center
21	SCAG	Southern California Association of Governments
22	SCAQMD	South Coast Air Quality Management District
23	SCE	Southern California Edison
24	SCRIA	South Central Reinjection Area
25	SD	Special Development
26	SDWA	Federal Safe Drinking Water Act
27	SF <sub>6</sub>	sulfur hexafluoride
28	SFHA	Special Flood Hazard Area
29	SHPO	State Historic Preservation Office
30	SIPs	state implementation plans
31	SJVAPCD	San Joaquin Valley Air Pollution Control District
32	SMCLs	secondary maximum contaminant levels
33	SO <sub>2</sub>	sulfur dioxide
34	SPCC Plan	Spill Prevention, Control, and Countermeasure Plan
35	SPT	Standard Penetration Tests
36	SR	State Route
37	SRRE	Source Reduction and Recycling Element
38	SS	Stainless steel
39	SSC	species of special concern
40	STAA	Surface Transportation Assistance Act
41	State Water Board	State Water Resources Control Board
42	SVP	Society of Vertebrate Paleontology

1	SWPPP	Stormwater Pollution Prevention Plan
2	SWRCB	State Water Resources Control Board
3	TACs	toxic air contaminants
4	TCLP	Toxicity Characteristic Leaching Procedure
5	TCPs	traditional cultural properties
6	TDS	total dissolved solids
7	UFWS	U.S. Fish and Wildlife Service
8	USA North	Underground Service Alert of Northern California
9	USC	U.S. Government Code
10	USDA	U.S. Department of Agriculture
11	USEPA	U.S. Environmental Protection Agency
12	USFWS	United States Fish and Wildlife Service
13	USGS	U.S. Geological Survey
14	UST	underground storage tank
15	VA	Veterans Administration
16	VDC	volts direct current
17	VMT	vehicle miles traveled
18	VOC	volatile organic compound
19	Water Board	California Regional Water Quality Control Board, Lahontan Region
20	WBA	Weak-Base Anion
21	WDID	Waste Discharge Identification
22	WDRs	waste discharge requirements
23	WECC	Western Electricity Coordinating Council
24	WHO	World Health Organization
25	ZVI	Zero-valent iron

# **Chapter 1**

## Introduction





This document contains comments submitted by agencies, organizations and individuals concerning the August 2012 Draft Environmental Impact Report (EIR) for the Comprehensive Groundwater Cleanup Strategy for Historical Chromium Discharges from Pacific Gas and Electric (PG&E)'s Hinkley Compressor Station Project (the proposed project), responses to those comments, and appropriate revisions to the Draft EIR. The California Regional Water Quality Control Board, Lahontan Region (Water Board), is the California Environmental Quality Act (CEQA) lead agency for this project.

PG&E has implemented remediation activities to clean the groundwater impacted by historical chromium discharges from the Hinkley Compressor Station, pursuant to existing Water Board orders. In order to comprehensively contain and remediate the chromium plume, the Water Board has worked with PG&E to develop feasible remedial approaches. The Draft EIR evaluates at an equal level of detail six project alternatives, each with different types and combinations of remediation activities.

The Draft EIR was made available to the public and regulatory agencies for review and comment during a 76-day comment period between August 21, 2012 and November 5, 2012.

## 1.1 CEQA Requirements

The Guidelines implementing CEQA require that written responses be prepared for all written comments received on a Draft EIR during the public review period. Per CEQA Guidelines Section 15132, the Final EIR shall consist of:

1. The Draft EIR or a revision of that draft.
2. Comments and recommendations received on the Draft EIR either verbatim or in a summary.
3. A list of persons, organizations, and public agencies commenting on the Draft EIR.
4. The response of the Lead Agency to significant environmental points raised in the review and consultation process.
5. Any other information added by the Lead Agency.

## 1.2 Final EIR Contents

This Final EIR has been prepared in compliance with the CEQA Guidelines and includes the following.

### **Volume I: Comments on the Draft EIR and Responses to Comments**

Chapter 1. Introduction

Chapter 2. Comments Received on the Draft EIR

Chapter 3. Responses to Comments

1	<b>Volume II: Revised Draft Environmental Impact Report</b>
2	Executive Summary
3	Chapter 1. Introduction
4	Chapter 2. Project Description
5	Chapter 3. Existing Conditions and Impacts
6	Chapter 4. Other CEQA Analyses
7	Chapter 5. References
8	Chapter 6. List of Preparers
9	Appendices
10	A. Groundwater and Remediation Supporting Documentation
11	B. Additional Data on Alternatives
12	C. Biological Resources Report
13	D. Air Quality and Climate Change Background Information
14	E. Notice of Preparation and Scoping Comments

## 15 **1.3 Recirculation**

16 The CEQA Guidelines require a Draft EIR be recirculated for public review if significant new  
17 information is added to the EIR after the close of the public comment period on the Draft EIR but  
18 before certification of the Final EIR. Under the Guidelines, recirculation is required when new  
19 significant information identifies:

- 20 • Significant new environmental impacts resulting from the project or from a new mitigation  
21 measure proposed to be implemented;
- 22 • Substantial increase in the severity of an environmental impact unless mitigation measures  
23 are adopted that reduce the impact to a level of insignificance;
- 24 • Feasible project alternatives or mitigation measures, considerably different from others  
25 previously analyzed, that clearly would lessen the environmental impacts of the project but  
26 that the project's proponents decline to adopt; or
- 27 • The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that  
28 meaningful public review and comment were precluded (Guidelines sec 15088.5[a]).

29 Recirculation is not required where the new information clarifies, amplifies, or makes minor  
30 modifications to an adequate EIR (Guidelines sec 15088.5[b]).

31 Information added to this EIR after the close of the Draft EIR public review period includes:

- 1 • Expanded plume area boundary and project study area boundary to include the latest
- 2 (Fourth Quarter [Q4] 2012) monitoring well results, and consideration of potential impacts;
- 3 • Additional analysis for the secondary impacts of water mitigation;
- 4 • Additional information and analysis regarding remedial byproducts; and
- 5 • Changes to mitigation in response to comments to clarify and expand mitigation intent or to
- 6 clarify mitigation application in light of new information reviewed.

7 The Water Board has determined that recirculation of the Draft EIR is not required because the new  
8 information and revisions provide clarification and amplification, and do not result in new or  
9 substantially more severe environmental impacts that have not already been discussed in the Draft  
10 EIR. The expanded plume area boundary and project study area do not change the nature of the  
11 activities evaluated in the EIR, so the expansion would not cause the project to result in any new or  
12 more harmful impacts than those already disclosed in the Draft EIR. Instead, the impacts would be  
13 “more of the same.” For this reason, the mitigation measures would apply equally well in the  
14 expanded area as in the areas already analyzed to minimize potentially significant environmental  
15 impacts. Further, recirculation is not required to provide additional notice because the Water Board  
16 already complied with CEQA’s notice requirements by publishing information about the proposed  
17 project in three local papers, on the Water Board’s webpage, and via an email notification service  
18 (Lyris list).

