CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER No. R5-2005-0722

FOR

UNITED STATES BUREAU OF LAND MANAGEMENT DIVISION OF ENERGY AND MINERALS

This Order is issued to the United States Bureau of Land Management, Division of Energy and Minerals (hereafter Discharger) based on provisions of California Water Code section 13304, which authorizes the California Regional Water Quality Control Board, Central Valley Region (hereafter Water Board) to issue a Cleanup and Abatement Order (Order).

The Water Board finds with respect to the Discharger's acts or failure to act, the following:

INTRODUCTION

- The United States Bureau of Land Management, Division of Energy and Minerals (BLM) owns the land where the Rathburn Mine and Rathburn-Petray Mine are located in Assessor's Parcel Number 018-020-001 in Section 7, T14N, R5W, MDB&M as shown in Attachments A and B, which are made part of this Order. Rathburn and Rathburn-Petray mines are named together in this Order because the mine sites are adjacent to each other.
- 2. The United States Bureau of Land Management has been the owner of this property since BLM was established in 1946. Prior to the inception of the BLM in 1946, the land comprising the mine sites was public domain. Former operators at the mines include Homestake Mining Company of California, Yellow Strike Exploration, Inc., Cypress Gold Exploration Corporation, and the Petray Family. The extent of involvement in mining activities conducted by the former operators is unknown. This Order may be revised to include additional Responsible Parties as they become known, and may include the former operators listed in this Finding.
- 3. The United States Bureau of Land Management, Division of Energy and Minerals, as the current owner of the mine sites is a Responsible Party. Rathburn and Rathburn-Petray Mines discharge mercury-bearing waste to the waters of the State, where it has created or threatens to create a condition of pollution or nuisance. As the current owner, the BLM has knowledge of the discharge and the ability to control it.
- 4. According to the BLM 2006 Budget Justifications (available from the BLM web site), the BLM will start cleanup at Rathburn and Rathburn Petray mine sites in 2006.

BACKGROUND

- 5. Rathburn and Rathburn-Petray Mines are located in the Sulphur Creek Mining District. The Rathburn and Rathburn-Petray mercury mines were worked prior to 1892, with the greatest activity reported between 1892 and 1893 for use in gold mining operations in California. Minor production also occurred in the late 1960's and early 1970's when Homestake Mining Company, Yellow Strike Exploration, Cypress Gold Exploration, and the Petray Family operated the mines.
- 6. Mercury-bearing material is exposed in cuts, slopes, open pits, mine waste piles, and storm water retention ponds. Ash from a brick retort at the Rathburn mine also contains elevated levels of mercury. Waste piles at Rathburn and Rathburn-Petray Mines collectively contain approximately 101,500 cubic yards of mercury-bearing waste material.
- 7. Surface water runoff during storm events erodes waste and tailings piles, overflows retention ponds, and transports mercury-laden sediment into drainage swales and unnamed tributaries of Bear Creek. Bear Creek is a tributary of Cache Creek and contributes an estimated 17% of methylmercury and 4% of total mercury load to Cache Creek. Mercury loads from upper Bear Creek range from 1.2 to 24.3 kg/year.
- 8. Monitoring of surface water, sediment and aquatic life in the Bear Creek watershed has been conducted by the Water Board, the California Geological Survey, and various consultants. Test results show mercury concentrations in the tissue of fish taken from Bear Creek ranged up to 6.0 ppm. USEPA guidelines for the consumption of locally caught fish corresponds to a safe concentration of mercury in fish tissue of 0.3 ppm.
- 9. Mercury contamination has been found in the water, sediment and biota downstream of the Rathburn and Petray mine sites. Mercury is a toxic substance, which can cause damage to the brain, kidneys and to a developing fetus. Young children are particularly sensitive to mercury exposure. Methylmercury, the organic form of mercury that has entered the biological food chain, is of particular concern, as it accumulates in fish tissue and in the wildlife and people that eat fish. Mine waste present at the Rathburn and Rathburn-Petray sites contains mercury that may pose a threat to human health due to exposure (dermal, ingestion, and inhalation) through recreation (hiking, camping, fishing, and hunting) or work at the mine sites.
- Section 303(d) of the Federal Clean Water Act requires states to identify waters not attaining water quality standards (referred to as the 303(d) list). Bear Creek has been identified by the Water Board as an impaired water body due to the high levels of mercury in fish and water sampled from Bear Creek. Bear Creek has been on the 303-(d) list since 1988.

- 11. The Water Board's *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereafter Basin Plan) designates beneficial uses of the waters of the State, establishes Water Quality Objectives (WQOs) to protect these uses, and establishes implementation policies to achieve WQOs.
- 12. Beneficial uses for Bear Creek as a tributary of Cache Creek are municipal/domestic supply, agriculture, industry, recreation, other non-contact, freshwater habitat warm/cold, spawning and wildlife habitat. In accordance with the Sources of Drinking Water Policy (State Water Resources Control Board Resolution No 88-63), the municipal and domestic supply designation (MUN) also applies to Bear Creek.
- 13. During winter months, surface water at the mine sites exceeds the WQOs for total mercury. Exceeding applicable WQOs constitutes a condition of pollution as defined in California Water Code section 13050, subdivision (1). The Discharger has caused or permitted waste to be discharged or deposited where it has discharged to waters of the State and has created, and continues to threaten to create, a condition of pollution or nuisance.
- 14. Water Quality Objectives listed in the Basin Plan include numeric WQOs, e.g., State drinking water Maximum Contaminant Levels (MCLs) that are incorporated by reference, and narrative WQOs, including narrative toxicity and taste and odor objectives for surface water and groundwater. Chapter IV of the Basin Plan contains the *Policy for Application of Water Quality Objectives*, which provides that "[w]here compliance with narrative objectives is required (i.e., where the objectives are applicable to protect specified beneficial uses), the Regional Board will, on a case-by-case basis, adopt numerical limitations in Orders which will implement the narrative objectives." The numerical limits for the constituents of concern listed in the following table implement the Basin Plan for mercury and methylmercury in Bear Creek.

Constituent	Limits	WQO	Reference
Methyl Mercury (organic)	0.07 µg/L	Narrative Toxicity	USEPA IRIS Reference Dose (RfD) as a drinking water standard
Methyl Mercury (organic)	0.3 µg/L	Narrative Toxicity	USEPA National Ambient Water Quality Criteria (fish tissue)
Mercury (total)	0.050 µg/L	Narrative Toxicity	Public Health Goal
Mercury (inorganic)	1.2 µg/L	Narrative Toxicity	Public Health Goal

 $\mu g/L = micrograms/liter$

The Draft Total Maximum Daily Load (TMDL) requirements, when amended into the Basin Plan will require a 95% load reduction of mercury for Cache Creek and its tributaries.

15. Under Water Code section 13050, subdivision (d), a "waste" includes "sewage and any and all other substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation, including waste placed within containers of whatever nature prior to, and for purposes of disposal." The constituents listed in Finding No.14 are wastes as defined in California Water Code section 13050, subdivision (d).

AUTHORITY – LEGAL REQUIREMENTS

- 16. The State Water Resources Control Board (hereafter State Board) has adopted Resolution No. 92-49, the Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304. This Policy sets forth the policies and procedures to be used during an investigation or cleanup of a polluted site and requires that cleanup levels be consistent with State Board Resolution No. 68-16, the Statement of Policy With Respect to Maintaining High Quality of Waters in California. Resolution No. 92-49 and the Basin Plan establish cleanup levels to be achieved. Resolution No. 92-49 requires waste to be cleaned up to background, or if that is not reasonable, to an alternative level that is the most stringent level that is economically and technologically feasible in accordance with the California Code of Regulations (CCR), title 23, section 2550.4. Any alternative cleanup level to background must: (1) be consistent with the maximum benefit to the people of the state; (2) not unreasonably affect present and anticipated beneficial use of such water; and (3) not result in water quality less than that prescribed in the Basin Plan and applicable Water Quality Control Plans and Policies of the State Board.
- 17. Chapter IV of the Basin Plan contains the *Policy for Investigation and Cleanup of Contaminated Sites*, which describes the Water Board's policy for managing contaminated sites. This policy is based on California Water Code sections 13000 and 13304, Chapter 15 of Division 3 of Title 23 of the California Code of Regulations, and Subdivision 1 of Division 2 of Title 27 of the California Code of Regulations and State Water Board Resolution Nos. 68-16 and 92-49. The policy addresses site investigation, source removal or containment, information required to be submitted for consideration in establishing cleanup levels, and the basis for establishment of soil and groundwater cleanup levels.
- 18. The State Board's *Water Quality Enforcement Policy* states in part: "At a minimum, cleanup levels must be sufficiently stringent to fully support beneficial uses, unless the Central Valley Water Board allows a containment zone. In the interim, and if restoration of background water quality cannot be achieved, the Order should require the discharger(s) to abate the effects of the discharge. Abatement activities may include the provision of alternate water supplies." (Water Quality Enforcement Policy, p. 19)
- 19. California Water Code section 13304, subdivision (a) provides that:

"Any person who has discharged or discharges waste into waters of the state in violation of any waste discharge requirements or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the board clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including but not limited to, overseeing cleanup and abatement efforts. Upon failure of any person to comply with the cleanup or abatement order, the Attorney General, at the request of the regional board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order. In the suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant."

20. California Water Code section 13267, subdivision (b) provides that:

"In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

The technical reports required by this Order are necessary to assure compliance with California Water Code section 13304. Existing data and information about the site, including, but not limited to, Findings No.2, 4 through 9, and 12 indicates that waste has been discharged or is discharging from the property, which is owned by the Discharger named in this Order.

21. California Water Code section 13304, subdivision(c)(1) provides that:

"... the person or persons who discharged the waste, discharges the waste, or threatened to cause or permit the discharge of the waste within the meaning of subdivision (a), are liable to that government agency to the extent of the

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reasonable costs actually incurred in cleaning up the waste, abating the effects of the waste, supervising cleanup or abatement activities, or taking other remedial actions."

22. California Water Code section 13304, subdivision (a) states, in pertinent part, that: "Upon failure of any person to comply with the cleanup and abatement order, the Attorney General, at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring the person to comply with the order."

- 23. If the Discharger violates this Order, then the Discharger may be liable civilly in a monetary amount provided by the California Water Code.
- 24. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.), pursuant to California code of Regulations, title 14, section 15321, subdivision (a)(2). The implementation of this Order is also an action to assure the restoration of the environment and is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, section 21000, et seq.), in accordance with California Code of Regulations, title 14, sections 15308 and 15330.
- 25. As the current landowner of these mines sites, BLM may be properly named as a responsible party in a cleanup and abatement order because current landowners have an obligation to prevent an ongoing discharge caused by the movement of pollutants even if the current land owner had nothing to do with initially putting the pollutants on the property. (See, e.g., *Petition of Spitzer*, Order No. WQ 89-8; *Petition of Logson*, Order No. WQ 84-6).
- 26. Under the Clean Water Act, 33 U.S.C. 1323 (a) in pertinent part, states that:

Each department, agency, or instrumentality of the executive, legislative, and judicial branches of the Federal Government (1) having jurisdiction over any property or facility, or (2) engaged in any activity resulting, or which may result, in the discharge or runoff of pollutants, and each officer, agent, or employee thereof in the performance of his official duties, shall be subject to, and comply with, all Federal, State, interstate, and local requirements, administrative authority, and process and sanctions respecting the control and abatement of water pollution in the same manner, and to the same extent as any nongovernmental entity including the payment of reasonable service charges. The preceding sentences shall apply (A) to any requirement, whether substantive or procedural (including any recordkeeping or reporting requirement, any requirement respecting permits and any other requirement, whatsoever), (B) to the exercise of any Federal, State, or local administrative authority, and (C) to any process and sanction, whether enforced in Federal, State, or local courts or in any other manner. This subsection shall apply

> notwithstanding any immunity of such agencies, officers, agents, or employees under any law or rule of law.

- As current landowner of these mine sites, BLM is also subject to the requirements of state law pursuant to 33 U.S.C. section 1323 (a). Pursuant to U.S.C. section 1323 (a), Congress expressly authorized state regulation of federal facilities and property which result, or may result in, water pollution. (*Petition of Robert James Claus*, WQ Order No. 85-1 at p.15.)
- 28. Any person affected by this action of the Water Board may petition the State Board to review the action in accordance with Title 23 CCR sections 2050-2068. The regulations may be provided upon request and are available at <u>www.swrcb.ca.gov</u>. The State Board must receive the petition within 30 days of the date of this Order.

REQUIRED ACTIONS

IT IS HEREBY ORDERED that, the United States Bureau of Land Management, Division of Energy and Minerals, pursuant to California Water Code section 13304 and California Water Code section 13267, shall:

 Investigate the discharges of waste, clean up the waste, and abate the effects, including threats to human health, of the waste, forthwith, resulting from activities at the Rathburn and Rathburn-Petray mines in conformance with State Board Resolution No. 92-49 *Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304* and with the Regional Board's Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (in particular the Policies and Plans listed within the Control Action Considerations portion of Chapter IV). "Forthwith" means as soon as is reasonably possible. Compliance with this requirement shall include, but not be limited to, completing the tasks listed below.

SITE ASSESSMENT

2. By 1 March 2006, submit a Work Plan for *Removal Site Evaluation* for each mine site. The Work Plan shall describe the methods that will be used to establish background levels of mercury in the soil and surface water at each mine site, and the means and methods for determining the vertical and lateral extent of waste piles, mining waste and soil and sediment contaminated with mercury at each mine site. The Work Plan shall describe how the extent of mercury-laden sediment that has been deposited downstream from the mine sites will be determined. The Work Plan shall describe that will be used and how runoff calculations will be determined. The Work Plan shall address the slope stability of each mine site and assess the need for slope design and slope stability measures. The Work Plan shall also describe how the hydrogeologic regime at each mine site will be determined, and shall propose a surface water and ground water monitoring plan. The Work Plan shall

also propose time schedules for implementation of the Removal Site Evaluation and completion of an Engineering Evaluation/Cost Analysis (hereafter EECA.)

- 3. Within **30** days of staff concurrence with the Work Plan, implement the Removal Site Evaluation in accordance with the approved time schedule, which shall become part of this Order.
- 4. By **30 July 2006**, submit a *Removal Site Evaluation Report* for each mine site listed in this Order. The Removal Site Evaluation Report shall include a narrative summary of the field investigation, a section including soil sampling results, slope stability and erosion potential, recommendations for slope stabilization, downstream extent of contamination, and a Work Plan for additional investigation, if needed. If no additional investigation is needed, this report shall be the *Final Removal Evaluation Report*.
- 5. Within **30** days of staff concurrence with the Work Plan for additional site evaluation, as determined in Task 4, implement the Work Plan and submit an *Additional Removal Site Evaluation Report*, in accordance with the approved time schedule, which shall become part of this Order.

PUBLIC PARTICIPATION

6. By **15** April 2006 submit a *Public Participation Plan*. The *Public Participation Plan* shall include, but not be limited to, a baseline community survey of potential stakeholders (recreational groups, adjacent property owners, citizen groups, State, County and local agencies, etc) to determine the level of public interest, and the stakeholder's desire for involvement in the cleanup and investigation activities at the mine sites. The *Public Participation Plan* shall solicit the stakeholder's concerns and address the dissemination of information to all interested parties regarding the cleanup activities at the mine sites. The *Public Participation Plan* shall be updated as necessary to reflect any significant changes in the degree of interest as the site investigation and cleanup process moves towards completion. At least one local information repository near the Rathburn and Rathburn-Petray mine sites must be established to contain documents.

HEALTH RISK ASSESSMENT

7. By **15 May 2006**, submit a work plan and time schedule to prepare a *Health Risk Assessment* (hereafter HRA). The work plan for the HRA and the HRA shall evaluate whether the mercury and methyl mercury present at the mine sites present a health risk to current and future residents, commercial/industrial workers or any other individual who may be in contact with mercury/methyl mercury from the mine sites. The HRA shall apply current methodology for assessing risks such as those outlined in guidance documents available through the California Department of Toxic Substances Control (DTSC) and USEPA. The Discharger may specify another

methodology for health risk assessment in the HRA Work Plan, which will be subject to Water Board staff approval. The exposure assessment portion of the HRA shall be determined through the creation of a Site Conceptual Model. Inhalation of mercuryladen dust, dermal contact with soil and water, and consumption of fish must be considered as exposure pathways.

WATER SUPPLY WELL SURVEY

- 8. By 30 April 2006, submit the results of a water supply well survey within one-half mile of the site and a sampling plan to sample any water supply well(s) threatened to be polluted by waste originating from the site. The sampling plan shall include specific actions and a commitment by the Discharger to implement the sampling plan, including obtaining any necessary access agreements.
- 9. Within **30 days** of Central Valley Water Board staff concurrence with the water supply well sampling plan, implement the sampling plan and submit the sampling results in accordance with the approved time schedule, which shall become part of this Order.
- 10. Within **30 days** of Central Valley Water Board staff notifying the Discharger that an alternate water supply is necessary, submit a work plan and schedule to provide an in-kind replacement for the specified water supply. The Discharger shall implement the work plan in accordance with an approved time schedule, which shall become part of this Order.

ENGINEERING EVALUATION /COST ANALYSIS

11. Within **120** days of staff concurrence with the Final Removal Site Evaluation Report, submit an *Engineering Evaluation/Cost Analysis* (EECA) for each mine site. The EECA shall describe site background (history, activities, and operations), previous site assessments, health and safety implementation, sampling rationale, and runoff calculations. It shall also summarize all available technical and engineering data pertaining to mercury levels of mercury in the soil and surface water at each mine site, and the means and methods for determining the vertical and lateral extent of waste piles, mining waste and soil and sediment contaminated with mercury at each mine site. It shall also assess the extent of mercury-laden sediment that has been deposited downstream from the mine sites. It shall address the slope stability issues associated with each mine site and assess the need for slope design and slope stability measures. It shall also describe the hydrogeologic regime at each mine site, and shall propose a surface and ground water monitoring plan. It shall also evaluate a series of reasonable and justifiable removal alternatives for the site.

RECORD OF DECISION

- 12. Within **120** days of staff concurrence with the EECA, submit a *Record of Decision* (ROD) for each mine site. The ROD include the preferred alternative(s) for site remediation and include a time schedule to conduct the cleanup activities. It shall also include the rationale for the chosen alternative(s) with regard to cost and human health risk assessment and incorporate plans for habitat restoration. Remedial activities associated with the cleanup of downstream, mercury laden sediment shall not commence until all cleanup activities are complete at the upstream mine sites. A separate time schedule for sediment remediation downstream of the mine sites shall be provided by the Discharger at the end of cleanup activities at the mine sites. All remedial activities shall be completed by 2011 to meet the TMDL requirements for mercury in the Basin Plan.
- 13. Within **60 days** of Executive Officer approval of the ROD, commence cleanup activities. The Discharger shall notify staff a minimum of 72 hours prior to beginning fieldwork.
- 14. Within **180** days of Executive Officer approval of the ROD, submit a report describing the status and results of the cleanup work (*Record of Decision Report*). The report shall clearly show whether the installation of any containment structures or stabilization efforts is complete, and if not, give a schedule and proposed work plan for installation of the remaining cleanup activities. The Report shall address long-term maintenance and monitoring necessary to confirm and preserve the long-term effectiveness of the remedies.

GENERAL REQUIREMENTS

- 15. Reimburse the Regional Board for reasonable costs associated with oversight of the investigation and remediation of the mine sites. By **31 January 2006** provide the name and address where the invoices shall be sent. Failure to provide a name and address for invoices and/or failure to reimburse the Water Board's oversight costs shall be considered a violation of this Order.
- 16. Conduct work only after Water Board staff concurs with work plans.
- 17. Submit all reports with a cover letter signed by the Discharger.
- 18. Fourteen days prior to conducting any fieldwork, submit a Health and Safety Plan that is adequate to ensure worker and public safety during the field activities in accordance with Title 8, CCR section 5192.
- 19. As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, have appropriate reports prepared by, or under the supervision of, a registered professional engineer or professional geologist and signed by the

registered professional. All technical reports submitted by the Discharger shall include a statement signed by the authorized representative certifying under penalty of law that the representative has examined and is familiar with the report and that to their knowledge, the report is true, complete, and accurate.

- 20. Notify Water Board staff at least three working days prior to any onsite work, testing, or sampling that pertains to environmental remediation and investigation and is not routine monitoring, maintenance, or inspection.
- 21. Obtain all local and state permits and access agreements necessary to fulfill the requirements of this Order prior to beginning work.
- 22. Continue any remediation or monitoring activities until such time as the Executive Officer determines that sufficient cleanup has been accomplished to fully comply with this Order and this Order has been rescinded.
- 23. If, for any reason, the Discharger is unable to perform any activity or submit any document in compliance with the schedule set forth herein, or in compliance with any work schedule submitted pursuant to this Order and approved by the Executive Officer, the Discharger may request, in writing, an extension of the time specified. The extension request shall include justification for the delay. An extension may be granted by revision of this Order or by a letter from the Executive Officer.
- 24. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may (1) refer this matter to the Attorney General for judicial enforcement; (2) issue a complaint for administrative civil liability; or (3) issue a time schedule order to establish monetary liability

This Order is effective upon the date of signature.

THOMAS R. PINKOS, Executive Officer

29 December 2005 (Date)



Name: WILBUR SPRINGS Date: 8/19/2005 Scale: 1 inch equals 2000 feet

ATTACHMENT A



Name: WILBUR SPRINGS NW Data: 6/19/2005 Scale: 1 inch equals 499 feet

ATTACHMENT B



California Regional Water Quality Control Board

Central Valley Region

Robert Schneider, Chair

Alan C. Lloyd, Ph.D. Secretary for Environmental Protection

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Arnold Schwarzenegger Governor

FILL COPY

29 December 2005

Mr. Richard Burns Field Office Manager Bureau of Land Management Ukiah Field Office 2550 North State Street Ukiah, CA 95482

CERTIFIED MAIL # 7003 0500 0004 7907 9294

CLEANUP AND ABATEMENT ORDER NO. R5-2005-0722 FOR RATHBURN AND RATHBURN-PETRAY MERCURY MINES, COLUSA COUNTY

Enclosed is Cleanup and Abatement Order No. R5-2005-0722 (Order) issued by the Executive Officer of the Central Valley Regional Water Quality Control Board (Water Board). A Draft of this Order was sent to you on September 21, 2005. During a phone conversation with John Key from the Sacramento BLM office, he indicated that BLM would not be providing comments on the Draft Order.

Cache Creek and some of its major tributaries, including Bear Creek and Sulphur Creek, have water quality impairments due to mercury discharges. Sources of mercury include inactive mercury mines in the upper watershed, including mercury loads from mines on United States Bureau of Land Management land.

The Central Valley Regional Water Quality Control Board recently approved proposed amendments to the Sacramento-San Joaquin River Basin Water Quality Control Plan (Basin Plan) to implement a control program to address the mercury problem in the Cache Creek Watershed. The implementation plan requires cleanup of mercury mine waste to meet water quality objectives.

It is the understanding of Regional Board staff that both Rathburn and Rathburn-Petray mines are on the Bureau of Land Management's list of mercury mines scheduled for cleanup in 2006.

Water Board staff look forward to working with the Bureau of Land Management to address the cleanup of Rathburn and Rathburn-Petray Mines.

California Environmental Protection Agency

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Mr. Richard Burns

If you have any questions, please contact Kathleen Amaru of my staff at (916) 464-4607 or email at kamaru@waterboards.ca.gov.

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CORI CONDON Senior Engineering Geologist

CC: Robert Schneider, Chair, Central Valley Regional Water Quality Control Board Patrick Morris, Central Valley Regional Water Quality Control Board David Coupe, OCC, State Water Resource Control Board, Sacramento Kelly Briggs, Central Valley Regional Water Quality Control Board, Sacramento Carol Atkins, California Bay Delta Authority David Lawler, USBLM John Key, USBLM Richard Grabowski, USBLM