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**I. FACILITY INFORMATION**

The following Discharger is subject to waste discharge requirements as set forth in this Order:

**Table 4. Facility Information**

<b>Discharger</b>	Berry Petroleum Company
<b>Name of Facility</b>	Poso Creek/McVan Facility
<b>Facility Address</b>	Poso Creek Oil Field
	T27S, R27E, S14
	Kern County
<b>Facility Contact, Title, and Phone</b>	Robert E. Boston, Environmental Health and Safety Manager, (661) 616-3900
<b>Mailing Address</b>	5201 Truxtun Avenue, Suite 300, Bakersfield, California 93309
<b>Type of Facility</b>	Crude Oil Extraction Facility
<b>Facility Design Flow</b>	1.68 (in million gallons per day)

**II. FINDINGS**

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

**A. Background.** Berry Petroleum Company (hereinafter Discharger) is currently discharging pursuant to Order No. 5-01-133 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0078867. The Discharger submitted a Report of Waste Discharge, dated 18 December 2003, and applied for a NPDES permit renewal to discharge up to 1.68 mgd of treated wastewater from McVan Area, Poso Creek Oil Field, hereinafter Facility. In January 2004, the Regional Water Board requested additional information from the Discharger to process the application. The Discharger submitted additional information in May 2005.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

**B. Facility Description.** The Discharger owns and operates a crude oil recovery facility in oil field leases at the Poso Creek/McVan Facility, Poso Creek Oil Field. The crude oil recovery process generates produced water (wastewater) that is treated and discharged within the lease area. The treatment system consists of mechanical separation, air floatation, and sedimentation. Produced water is discharged from Discharge Point 001 (see table on cover page) to an unnamed ephemeral stream, a water of the United States and a tributary to Poso Creek within the South Valley Floor Hydrologic Unit, Kern Uplands Hydrologic Area (558.90). Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

- C. Legal Authorities.** This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).
- D. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.
- E. California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.
- F. Technology-based Effluent Limitations.** Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (CFR) require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Effluent Limitations Guidelines and Standards for the Oil and Gas Extraction Category in Part 435 and Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).
- G. Water Quality-based Effluent Limitations.** Section 301(b) of the CWA and 40 CFR 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using: (1) EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed State criterion or policy interpreting the State's narrative criterion, supplemented with other relevant information, as provided in 40 CFR 22.44(d)(1)(vi).
- H. Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan, Second Edition, for the Tulare Lake Basin* (hereinafter Basin Plan) that

designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page II-2 states that the “...*beneficial uses of any specifically identified water body generally apply to its tributary streams.*” The Basin Plan does not specifically identify beneficial uses for the unnamed ephemeral stream, but does identify present and potential uses for Poso Creek, to which the unnamed stream is tributary. These beneficial uses are as follows: agricultural supply, water contact recreation, non-contact water recreation, warm freshwater habitat, cold freshwater habitat, wildlife habitat, groundwater recharge, and freshwater replenishment. Thus, the beneficial uses applicable to the unnamed tributary to Poso Creek and the underlying groundwater are as follows:

**Table 5. Basin Plan Beneficial Uses**

<b>Discharge Point</b>	<b>Receiving Water Name</b>	<b>Beneficial Use(s)</b>
001	<b>Unnamed Tributary to Poso Creek</b>	<u>Existing (surface water):</u> Agricultural supply (AGR), water contact recreation (REC-1), non-contact water recreation (REC-2), warm freshwater habitat (WARM), cold freshwater habitat (COLD), wildlife habitat (WILD), ground water recharge (GWR), and freshwater replenishment (FRSH).
	<b>Groundwater</b>	<u>Existing (groundwater):</u> Municipal and domestic water supply (MUN), agricultural supply (AGR), industrial service supply (IND), and water contact recreation (REC-1).

Requirements of this Order implement the Basin Plan, except for COLD in the unnamed tributary to Poso Creek.

*Comment 1) Paragraph H, Water Quality Control Plans states that Requirements of this Order implement the Basin Plan. This Phrase should be replaced by “Requirements of this Order implement the Basin Plan, except for COLD in the Unnamed Tributary to Poso Creek”*

*Comment 2) After Paragraph H, the following finding should be inserted:*

In Order No. 5-01-133, the Regional Water Board found that “The beneficial uses identified in the Basin Plan for Poso Creek, except for cold freshwater habitat (COLD), are applicable to the unnamed ephemeral stream.” In Order No. 5-01-133 also noted that the previous “Order No. 95-153 found that cold freshwater habitat (COLD) is not a beneficial use of the unnamed ephemeral stream” (Unnamed Tributary to Poso Creek). Given the ephemeral nature of Poso Creek and the unnamed tributary, cold freshwater habitat (COLD) does not appear to be a beneficial use for these reaches.” This Order recognizes that COLD is a designated use and by law must be protected, but authorizes an ongoing and increased discharge of elevated temperature waste due to flow conditions and field observations which indicate that COLD beneficial use is improbable.

The Regional Water Board staff will be initiating a Use and Attainability Analysis to support an amendment to the Basin Plan to dedesignate COLD as a beneficial use of Poso Creek within the South Valley Floor Hydrologic Unit, Kern Uplands Hydrologic Area (558.90).

- I. National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.
- J. State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. Compliance Schedules and Interim Requirements.** In general, an NPDES permit must include final effluent limitations that are consistent with Clean Water Act section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board has concluded that where the Regional Water Board's Basin Plan allows for schedules of compliance and the Regional Water Board is newly interpreting a narrative standard, it may include schedules of compliance in the permit to meet effluent limits that implement a narrative standard. See *In the Matter of Waste Discharge Requirements for Avon Refinery* (State Board Order WQ 2001-06 at pp. 53-55). See also *Communities for a Better Environment (CBE) et al. v. State Water Resources Control Board*, 34 Cal.Rptr.3d 396, 410 (2005). The Basin Plan includes a provision that authorizes the use of compliance schedules in NPDES permits provided that the schedule does not allow more than 10 years (from the adoption date of the objective or criteria) for compliance (see Basin Plan page IV-22). Consistent with the State Water Board's Order in the CBE matter, the Regional Water Board has the discretion to include compliance schedules in NPDES permits when it is including an effluent limitation that is a "new interpretation" of a narrative water quality objective. This conclusion is also consistent with the United States Environmental Protection Agency policies and administrative decisions. See, e.g., *Whole Effluent Toxicity (WET) Control Policy*. The Regional Water Board, however, is not required to include a schedule of compliance, but may issue a Time Schedule Order pursuant to Water Code section 13300 or a Cease and Desist Order pursuant to Water Code section 13301 where it finds that the discharger is violating or threatening to violate the permit. The Regional

Water Board will consider the merits of each case in determining whether it is appropriate to include a compliance schedule in a permit, and, consistent with the Basin Plan, should consider feasibility of achieving compliance, and must impose a schedule that is as short as practicable to achieve compliance with the objectives, criteria, or effluent limit based on the objective or criteria.

For CTR constituents, Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation that exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective.

- L. Alaska Rule.** On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 CFR 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.
- M. Stringency of Requirements for Individual Pollutants.** This Order contains technology-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on oil and grease. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements and are no more stringent than required to implement the technology-based requirements of the CWA.
- N. Antidegradation Policy.** Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 is consistent with the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.

- O. Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. Some effluent limitations in this Order are less stringent than those in the previous Order. As discussed in detail in the Fact Sheet this relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.
- P. Monitoring and Reporting.** Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.
- Q. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.
- R. Provisions and Requirements Implementing State Law.** The provisions/requirements in subsections V.B and VI.C of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- S. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.
- T. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

### III. DISCHARGE PROHIBITIONS

- A. Discharge of waste other than treated oilfield produced water at the location and in the manner described in the Findings and authorized herein is prohibited.

- B. The bypass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).
- C. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.
- D. Discharge of waste classified as 'hazardous', as defined in section 2521(a) of Title 23, CCR, section 2510 et seq., or of waste classifiable as 'designated', as defined in CWC section 13173, such as water softener brine, is prohibited.

#### **IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

##### **A. Effluent Limitations – Discharge Point 001**

###### **1. Final Effluent Limitations – Discharge Point 001**

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):

- a. Limitations in Table 6, as set forth below:



**Table 6. Effluent Limitations**

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	--	1.68	--	--
pH	standard	--	--	6.5	8.3
Electrical Conductivity at 25°C	umhos/cm	--	1000	--	--
Chloride	mg/L	--	175	--	--
	lbs/day <sup>1</sup>	--	2453	--	--
Boron, Total Recoverable	mg/L	--	1	--	--
	lbs/day <sup>1</sup>	--	<del>0.014</del> 14	--	--
Oil and Grease	mg/L	--	35	--	--
	lbs/day <sup>1</sup>	--	<del>0.49</del> 49	--	--

1 Based on a design flow of 1.68 mgd.

*Comment 3) Table 6 above appears to contain two errors, the calculated maximum daily effluent limitations for Total Recoverable Boron and for Oil and Grease should be changed to 14 and 490 lbs/day, respectively.*

**b. Acute Whole Effluent Toxicity.** Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

- i. 70%, minimum for any one bioassay; and
- ii. 90%, median for any three consecutive bioassays.

**2. Interim Effluent Limitations – Not Applicable**

**B. Land Discharge Specifications – Not Applicable**

**C. Reclamation Specifications – Not Applicable**

**V. RECEIVING WATER LIMITATIONS**

**A. Surface Water Limitations**

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The unnamed tributary to Poso Creek is an ephemeral stream and only occasionally contains water. The discharge shall not cause the following in the unnamed tributary to Poso Creek:

*Comment 4) In Section V, Subsection A above, the unnamed tributary to Poso Creek is described as ephemeral. The provision needs to contain clarification language on how compliance with surface water limitations will be demonstrated by the discharger when there is no upstream flow or insufficient flow for monitoring purposes. This is especially important for the measured parameters dissolved oxygen, pH, turbidity and temperature since compliance is based on a comparison with either upstream or main water mass flow. Proposed language clarifying*

*application of the limitations in the event flow upstream of the discharge is absent is inserted below following Item 14 of this subsection.*

1. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
2. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
3. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
4. **Dissolved Oxygen:**
  - a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass at centroid of flow;
  - b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
  - c. The dissolved oxygen concentration to be reduced below 5.0 mg/L at any time.
5. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
6. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
7. **pH.** The pH to be depressed below 6.5, raised above 8.3, or changed by more than 0.3 units.

*Comment 5) In Section A, Item 7, pH above the allowable pH change of 0.3 units is inconsistent with, Appendix F, Section C Water Quality Based Effluent Limitations (WQBELs), Item 3 pH which indicates the allowable change is 0.5 units. Changes need to be made to one or both of these provisions so they are consistent with the basin plan.*

8. **Suspended Sediments.** The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
9. **Settleable Substances.** Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
10. **Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.
11. **Taste and Odors.** Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible

products of aquatic origin, or to domestic or municipal water supplies.

12. **Temperature.** The natural temperature to be increased by more than 5°F.
13. **Toxicity.** Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
14. **Turbidity.** The turbidity to increase as follows:
  - a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs.
  - b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.
  - c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
  - d. More than 10 percent where natural turbidity is greater than 100 NTUs.

Surface water limitations for dissolved oxygen, pH, temperature, and turbidity described above are dependent on a comparison with receiving water flow upstream of the discharge and therefore apply only during periods when there is sufficient flow upstream of the discharge for receiving water monitoring.

## B. Groundwater Limitations

The discharge shall not cause greater salinity degradation of the underlying groundwater than authorized by salinity effluent limitations and provisions specified in Table 6 herein.

Comment 6) In Section B, Groundwater Limitations above it is unclear which salinity provision “specified herein” is being referenced. A citation of the referenced salinity effluent limitation and/or provision it is contained in is needed for clarity.

## VI. PROVISIONS

### A. Standard Provisions

1. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. The Discharger shall comply with the following provisions:
  - a. If the Discharger’s wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 26.
  - b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

- i. violation of any term or condition contained in this Order;
- ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
- iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
- iv. a material change in the character, location, or volume of discharge.

The causes for modification include:

- *New regulations.* New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.
- *Land application plans.* When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.
- *Change in sludge use or disposal practice.* Under 40 CFR 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Regional Water Board's own motion.

- c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

- d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:
  - i. contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

- ii. controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

- e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
- f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.
- g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.
- h. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.
- i. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.
- j. Safeguard to electric power failure:
  - i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.
  - ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.
  - iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms

and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.

- k. The Discharger, upon written request of the Regional Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision VI.A.2.m.

The technical report shall:

- i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.
- ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.
- iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Regional Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

- l. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.
- m. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To

demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work. These requirements do not apply to monitoring reports except as specified in the monitoring and reporting program (Appendix E).

*Comment 7) Section A, Subsection 2, Item m above should contain a clarifying statement that the requirements for preparation of reports under direction of registered personnel and inclusion of statements of qualifications are not intended to apply to monitoring reports except as specified in the MRP.*

- n. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.
- o. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.
- p. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
- q. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.
- r. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.
- s. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.
- t. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.
- u. Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC section 1211)

- v. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (559) 445-5116 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Attachment D, Section V.E.1 [40 CFR 122.41(l)(6)(i)].

## **B. Monitoring and Reporting Program (MRP) Requirements**

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.

## **C. Special Provisions**

### **1. Reopener Provisions**

- a. This Order requires the Discharger to conduct monthly monitoring of the effluent for total recoverable lead and zinc. After collecting at least one-year of data, the Discharger shall determine if the discharge has reasonable potential to exceed water quality objectives or criteria for the constituents. Based on a review of the reasonable potential analysis, this Order may be reopened for addition and/or modification of effluent limitations and requirements for these constituents. This Order also requires the Discharger to conduct a study of molybdenum and determine appropriate water quality limitations. Based on the results of the study, this Order may be reopened to include receiving water and effluent limitations for molybdenum. This Order requires the Discharger to conduct a study to examine ~~the evidence concerning the designated beneficial uses of GOLD and WARM and~~ whether project modifications are necessary to mitigate potential impacts of elevated temperature waste on ~~GOLD and WARM~~. Depending on the results of the study, ~~and whether the Regional Water Board determines GOLD should be dedesignated~~, this Order will be reopened as necessary to establish or modify effluent or receiving water limitations such that beneficial uses are fully protected from potential thermal impacts.

*Comment 8) In Section C, Item 1 Reopener Provisions above a reasonable potential analysis is cited. A description of the analysis, code reference, and/or guidance document reference is needed to clarify the scope of the requirement.*

*Comment 9) In Section C, Item 1 Reopener Provisions the reference to COLD beneficial uses should be deleted to be consistent with comment 2.*

- b. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not



limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

- c. Conditions that necessitate a major modification of a permit are described in 40 CFR 122.62, including:
  - i. If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.
  - ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.
- d. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.
- e. **Water Effects Ratios (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.
- f. **Constituent Study.** If after review of the study results it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective this Order may be reopened and effluent limitations added for the subject constituents.

## 2. Special Studies, Technical Reports and Additional Monitoring Requirements

- a. **Beneficial Use Study.** The Discharger shall submit, **within 180 days** of the adoption of the Order, a written work plan with a proposed time schedule to conduct a study to determine:

~~Whether GOLD exists or has potential to exist in the unnamed tributary and down stream of its confluence with Poso Creek (if the receiving water was unaffected by elevated temperature waste). If GOLD does not and has no reasonable potential to exist in such setting, the study should provide evidence suitable to support a use attainability analysis in accordance with 40 CFR 131.10 and a possible Basin Plan amendment to~~

~~dedesignate GOLD for the reach studied. If GOLD does or has reasonable potential to exist in such setting, the study must either demonstrate that the elevated temperature waste discharge does not affect GOLD or provide a work plan and time schedule for implementing project modifications that fully protects GOLD.~~

*Comment 11) Beneficial Use Study, Item i. needs to be deleted to be consistent with Comment 2.*

- i. Whether elevated temperature waste discharge adversely affects WARM beneficial uses of the unnamed tributary and Poso Creek. The study shall be prepared to address...(insert guidance document or regulatory section reference). If the discharge adversely affects WARM, the study must provide a proposed effluent limitation for temperature sufficient to protect WARM under all foreseeable discharge conditions and a work plan and time schedule to implement project modifications to achieve the limitation.

*Comment 12) The intended scope of Subsection a, Item I above is unclear. A description of the analysis, code reference, and/or guidance document reference is needed to clarify the scope of the requirement. A reference to documents describing specific numeric criteria that identify WARM characteristics is also needed.*

The work plan, time schedule and study must be designed and implemented by appropriate professionals with experience conducting in-field aquatic studies and engineering works to meet effluent limitations.

- b. **Salinity Evaluation and Minimization Plan.** The Discharger shall prepare a salinity evaluation and minimization plan to address sources of salinity from the Facility. The study shall identify each waste stream contributing to the discharge, test each waste stream for electrical conductance and evaluate the salinity mass associated with each waste stream. The study shall also evaluate the cost-effectiveness of methods to reduce or eliminate salinity from the waste stream representing the highest salinity loading. The plan shall be completed and submitted to the Regional Water Board **within nine months of the effective date of this Order** for approval by the Executive Officer.

*Comment 13) The intended scope of Subsection b, Salinity Evaluation and Minimization Plan above is unclear. Based on phone conversations between Berry and the RWQCB the intended scope consists of periodic electrical conductance measurements of wastewater streams contributing to the discharge and an evaluation of the cost effectiveness of potential salinity reduction measures for wastewater stream representing the highest measurement. Language to this effect is needed to clarify the requirements of the above referenced provision.*

- c. **Molybdenum Study.** The Discharger shall submit, **within 180 days** of the adoption of the Order, a work plan with a proposed time schedule to conduct a study and determine an appropriate water quality limitation for molybdenum that fully protects designated beneficial uses of the unnamed tributary and, if necessary, propose an appropriate effluent limit for molybdenum to ensure the discharge does not cause exceedance of the water quality limitation. The study shall be prepared to address...(insert guidance document or regulatory section

~~reference). The study shall, at a minimum, determine: (1) the spatial extent of surface water and groundwater affected, or potentially affected, by the discharge, (2) an applicable water quality limitation for molybdenum based on identified forms of designated beneficial uses that occur and are probable of surface water and groundwater affected by the discharge, and (3) a numerical effluent limit for molybdenum if a reasonable potential is found.~~

*Comment 14) The intended scope of Subsection c. Molybdenum Study is unclear. Based on discussions with RWQCB staff, the intended scope should be revised so 1) the discharger proposes an appropriate water quality limitation for molybdenum that protects designated beneficial uses of the unnamed tributary (excluding COLD), 2) the RWQCB staff will accept or provide comments on the proposed limitation. Once the RWQCB staff accepts the proposed limitation, the study described would only be required in the event that the discharge does not consistently meet the accepted limitation.*

- d. **Chronic Whole Effluent Toxicity.** The Discharger shall conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). Furthermore, the Discharger shall investigate the causes of, and identify corrective actions to, reduce or eliminate effluent toxicity. If the discharge exceeds the toxicity numeric monitoring trigger established in this Provision, the Discharger shall initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent reoccurrence of toxicity. A TRE is a site-specific study conducted in a stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity.
- i. **Initial Investigative Toxicity Reduction Evaluation (TRE) Work Plan.** **Within 90 days of the effective date of this Order,** the Discharger shall submit to the Regional Water Board an Initial Investigative TRE Work Plan for approval by the Executive Officer. This should be a one to two page document including, at minimum:
- a) A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of effluent toxicity, effluent variability, and treatment system efficiency;
  - b) A description of the facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in operation of the facility; and
  - c) A discussion of who will conduct the Toxicity Identification Evaluation, if necessary (i.e. an in-house expert or outside contractor).
- ii. **Accelerated Monitoring and TRE Initiation.** When the numeric toxicity monitoring trigger is exceeded during regular chronic toxicity monitoring, and

the testing meets all test acceptability criteria, the Discharger shall initiate accelerated monitoring as required in the Accelerated Monitoring Specifications. WET testing results exceeding the monitoring trigger during accelerated monitoring demonstrates a pattern of toxicity and requires the Discharger to initiate a TRE to address the effluent toxicity.

- iii. **Numeric Monitoring Trigger.** The numeric toxicity monitoring trigger is  $> 1 \text{ TUc}$  (where  $\text{TUc} = 100/\text{NOEC}$ ). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to begin accelerated monitoring and initiate a TRE.
- iv. **Accelerated Monitoring Specifications.** If the monitoring trigger is exceeded during regular chronic toxicity testing, within 14-days of notification by the laboratory of the test results, the Discharger shall initiate accelerated monitoring. Accelerated monitoring shall consist of four (4) chronic toxicity tests every two weeks using the species that exhibited toxicity. The following protocol shall be used for accelerated monitoring and TRE initiation:
  - a) If the results of four (4) consecutive accelerated monitoring tests do not exceed the monitoring trigger, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring. However, notwithstanding the accelerated monitoring results, if there is adequate evidence of a pattern of effluent toxicity, the Executive Officer may require that the Discharger initiate a TRE.
  - b) If the source(s) of the toxicity is easily identified (i.e. temporary plant upset), the Discharger shall make necessary corrections to the facility and shall continue accelerated monitoring until four (4) consecutive accelerated tests do not exceed the monitoring trigger. Upon confirmation that the effluent toxicity has been removed, the Discharger may cease accelerated monitoring and resume regular chronic toxicity monitoring.
  - c) If the result of any accelerated toxicity test exceeds the monitoring trigger, the Discharger shall cease accelerated monitoring and initiate a TRE to investigate the cause(s) of, and identify corrective actions to reduce or eliminate effluent toxicity. Within thirty (30) days of notification by the laboratory of the test results exceeding the monitoring trigger during accelerated monitoring, the Discharger shall submit a TRE Action Plan to the Regional Water Board including, at minimum:
    - 1) Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including TRE WET monitoring schedule;
    - 2) Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and
    - 3) A schedule for these actions.

### 3. Best Management Practices and Pollution Prevention - Not Applicable

### 4. Construction, Operation and Maintenance Specifications

- a. The sumps and other portions of the Facility that have the potential to attract wildlife shall be free of oil coatings or shall be covered or screened to preclude entry of bird and animal life.
- b. The sumps shall be protected from inundation or washout due to floods with a 100-year return frequency.

### 5. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

### 6. Other Special Provisions

- a. Sludge Disposal Requirements
  - i. Collected screenings, sludge, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq.
  - ii. Any proposed change in sludge use or disposal practice from a previously approved practice shall be reported to the Executive Officer and USEPA Regional Administrator at least 90 days in advance of the change.
  - iii. Within **60 days** of the adoption of the Order, the Discharger shall submit a Sludge Management Plan describing the annual volume of sludge generated by the Facility and specifying the method and location of sludge disposal or reuse.
- b. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Regional Water Board.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory and certification requirements in the Federal Standard Provisions (Attachment D, Section V.B.) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without

requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

**7. Compliance Schedules – Not Applicable**

## ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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## **ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)**

CFR 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and state regulations.

### **I. GENERAL MONITORING PROVISIONS**

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.
- B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.
- C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services. Laboratories that perform sample analyses shall be identified in all monitoring reports.
- D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.



## II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	After all treatment units, prior to discharge to the unnamed tributary to Poso Creek
--	RSW-001	250 feet upstream from the point of discharge to the unnamed tributary to Poso Creek
--	RSW-002	250 feet downstream from the point of discharge to the unnamed tributary to Poso Creek

## III. INFLUENT MONITORING REQUIREMENTS – Not Applicable

## IV. EFFLUENT MONITORING REQUIREMENTS

### A. Monitoring Location EFF-001

1. The Discharger shall monitor the discharge of wastewater to the unnamed tributary to Poso Creek at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

**Table E-2. Effluent Monitoring**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Flow	mgd	Meter	Continuous	
Temperature <sup>1</sup>	°F	Meter	1/month <sup>5</sup>	
pH	standard	Grab	1/month <sup>5</sup>	2
Electrical Conductivity @ 25°C	umhos/cm	Grab	1/month <sup>5</sup>	2
Chloride	mg/L	Grab	1/month	2
Boron, Total Recoverable	mg/L	Grab	1/month	2
Oil and Grease	mg/L	Grab	1/month	2
Lead, Total Recoverable	ug/L	Grab	1/month	2,3
Zinc, Total Recoverable	ug/L	Grab	1/month	2,3
Molybdenum, Total Recoverable	ug/L	Grab	1/month	2
Standard Minerals <sup>4</sup>	mg/L	Grab	1/year <sup>5</sup>	2
Priority Pollutants	ug/L	Grab	1/year <sup>5</sup>	2,3

1 Effluent Temperature monitoring shall be at the Outfall location.

2 Samples shall be analyzed using the methods and procedures described in the 40 CFR 136. The Discharger shall use a Department of Health Services licensed laboratory capable of providing method detection limits and minimum levels sufficient to determine compliance with effluent limitations.

3 For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.

4 Standard minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

5 Concurrent with receiving surface water sampling.

6 After a year of monitoring demonstrates compliance with effluent limitations, the Regional Board will consider reductions in monitoring frequency.

*10) Table E-2 above requires monthly and annual sampling for a variety of constituents. Berry and the RWQCB have discussed by phone the addition of a footnote that the discharger may apply to the RWQCB to reduce the sampling frequency based on a comparison of one year of accumulated data with effluent limitations or other appropriate criteria.*

**V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS**

**A. Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:

1. Monitoring Frequency – the Discharger shall perform annual acute toxicity testing, concurrent with effluent monitoring and sampling.
2. Sample Types – For static non-renewal and static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-001.

3. Test Species – Test species shall be fathead minnows (*Pimephales promelas*).
  4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
  5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
- B. Chronic Toxicity Testing.** The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:
1. Monitoring Frequency – the Discharger shall perform annual three species chronic toxicity testing concurrent with effluent monitoring and sampling.
  2. Sample Types – Effluent samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location specified in the Monitoring and Reporting Program. The receiving water control shall be a grab sample obtained from the RSW-001 sampling location, as identified in the Monitoring and Reporting Program. In the absence of receiving water (due to ephemeral nature of tributary), an alternate control sample shall be obtained from Poso Creek. If Poso Creek water is not available, lab water may be used as a control.
  3. Sample Volumes – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
  4. Test Species – Chronic toxicity testing measures sublethal (e.g. reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
    - The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
    - The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
    - The green alga, *Selenastrum capricornutum* (growth test).
  5. Methods – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002.*
  6. Reference Toxicant – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.

7. ***Dilutions*** – The chronic toxicity testing shall be performed using 100% effluent and two controls. If toxicity is found in any effluent test, the Discharger must immediately retest using the dilution series identified in Table E-3, below. ~~The receiving water control shall be used as the diluent (unless the receiving water is toxic). If the receiving water is toxic~~ Since the receiving water is ephemeral, laboratory control water or water from Poso Creek may be used as the diluent., ~~in which case, the receiving water should still be sampled and tested to provide evidence of its toxicity. In the absence of receiving water (due to ephemeral nature of tributary), an alternate diluent sample may be obtained from Poso Creek.~~

11) Section B, Item 7 above includes a provision for using water collected from the receiving water or Poso Creek for dilution. Since both the receiving water and Poso Creek are ephemeral it is proposed that the requirement default to laboratory water. This would make the toxicity data from various years comparable regardless of whether there is stream flow. The use of receiving water or Poso Creek water for dilution should remain in the provision as an option.

8. ***Test Failure*** –The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:
- a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or
  - b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in Special Provisions VI.C.2.a.iii of this Order)

**Table E-3. Chronic Toxicity Testing Dilution Series**

Sample	Dilutions (%)					Controls	
	100	75	50	25	12.5	Receiving Water	Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

- C. **WET Testing Notification Requirements.** The Discharger shall notify the Regional Water Board within 24-hrs after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.
- D. **WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory’s complete report provided to the Discharger and shall be in

accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:

1. **Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:
  - a. The results expressed in TUC, measured as 100/NOEC, and also measured as 100/LC<sub>50</sub>, 100/EC<sub>25</sub>, 100/IC<sub>25</sub>, and 100/IC<sub>50</sub>, as appropriate.
  - b. The statistical methods used to calculate endpoints;
  - c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);
  - d. The dates of sample collection and initiation of each toxicity test; and
  - e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUC, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE. (Note: items a through c, above, are only required when testing is performed using the full dilution series.)

2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.
3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan.
4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes (If applicable):
  - a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
  - b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
  - c. Any information on deviations or problems encountered and how they were dealt with.

## VI. Land Discharge Monitoring Requirements – Not Applicable

## VII. Reclamation Monitoring Requirements – Not Applicable

## VIII. Receiving Water Monitoring Requirements – Surface Water

### A. Monitoring Location RSW-001 and RSW-002

1. Receiving water monitoring is required when there is sufficient flow upstream at RSW-001 to allow for the required monitoring. The Discharger shall monitor the unnamed tributary to Poso Creek at RSW-001 and RSW-002 as follows:

**Table E-4. Receiving Water Monitoring Requirements**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dissolved Oxygen	mg/L	Grab	1/month	1
pH	Standard	Grab	1/month	1
Temperature	°F	Grab	1/month	1
Electrical Conductivity @ 25°C	umhos/cm	Grab	1/month	1
Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	1/month	1
Lead, Total Recoverable	ug/L	Grab	1/month	1,2
Zinc, Total Recoverable	ug/L	Grab	1/month	1,2
Molybdenum, Total Recoverable	ug/L	Grab	1/month	1

- 1 Samples shall be analyzed using the methods and procedures described in the 40 CFR 136. The Discharger shall use a Department of Health Services licensed laboratory capable of providing method detection limits and minimum levels sufficient to determine compliance with effluent limitations.
- 2 For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.
- 3 After a year of monitoring demonstrates compliance with receiving water limitations, the Regional Board will consider reductions in monitoring frequency.

*12) The Table E-4 above requires monthly and annual sampling for a variety of constituents. Berry and the RWQCB have discussed the addition of a footnote that the discharger may apply to the RWQCB to reduce the sampling frequency based on a comparison of one year of accumulated data with effluent limitations or other appropriate criteria.*

*13) The Table E-4 above requires sampling at receiving water locations RSW-001 and RSW-002. Due to the ephemeral nature of the stream these locations are likely to be either dry or have too little water for sampling during most sampling events. The provision should clearly state that monitoring at RSW-002 is only required if there is sufficient flow at RSW-1 for the required sampling.*

2. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. Notes on receiving water conditions shall be summarized in the monitoring reports. Attention shall be given to the presence of:
  - a. Floating or suspended matter
  - b. Discoloration
  - c. Bottom Deposits
  - d. Aquatic Life
  - e. Visible films, sheens, or coatings
  - f. Fungi, slimes, or objectionable growths
  - g. Potential nuisance conditions

## IX. Other Monitoring Requirements

## A. Sumps and Facility Monitoring

1. The Discharger shall regularly inspect sumps and other portions of the Facility that have the potential to attract birds and animal life. A log shall be kept of the sumps and facility conditions. Attention shall be given to the presence or absence of:

### Unscreened / Uncovered Sumps and Facilities

- a. Oil sheen or coatings in sumps and conveyance structures
- b. Animals (e.g. birds, rodents, etc.) in sumps, conveyance structures, and tanks

### Screened / Covered Sumps and Facilities

- a. Integrity of the screen /cover
- b. Effectiveness of the screen / cover

Notes on observed conditions at or of the aforementioned sumps and portions of the Facility shall be summarized in the monitoring report for all sumps and portions of the Facility in use. The summary shall also indicate whether any remedial action is needed or was taken to ensure compliance with the Special Provision VI.C.4.b, and shall briefly explain what action has been taken or is scheduled to be taken.

## X. REPORTING REQUIREMENTS

### A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).
3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.
4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ( $\pm$  a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
  - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
5. **Multiple Sample Data.** When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
  - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

## **B. Self Monitoring Reports (SMRs)**

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (<http://www.waterboards.ca.gov/ciwqs/index.html>). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.



2. Monitoring results shall be submitted to the Regional Water Board by the first day of the second month following the calendar quarter sample collection. Annual monitoring results shall be submitted by the first day of the second month following each calendar year.

*14) Section B. Item 2 above requires monthly monitoring reports. Berry and the RWQCB have discussed by phone a reduction in monitoring reporting frequency to quarterly after an initial period of monthly reporting.*

3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month, monthly and weekly averages, and medians, etc., shall be determined and recorded as needed to demonstrate compliance.
4. Flow shall be reported as the total volume discharged per day for each day of discharge.
5. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.
6. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.
7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Regional Water Quality Control Board  
 Central Valley Region – Fresno Branch Office  
 1685 E Street  
 Fresno, California 93706

8. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-5. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
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Continuous	Permit effective date	All	Submit with <u>quarterly</u> <u>monthly</u> SMR
Monthly	First day of calendar <u>quarter month</u> following permit effective date or on permit effective date if that date is first day of the <u>quarter month</u>	1 <sup>st</sup> day of calendar <u>quarter month</u> through last day of calendar <u>quarter month</u>	First day of second month following <u>each calendar quarter sample collection</u>
Annually	Permit effective date	January 1 through December 31	First day of second month following calendar year

Discharger may elect to submit a combined fourth quarter and annual SMR in lieu of a separate fourth quarter and annual reports.

*15) Table E-5 above requires monthly monitoring reports. As described above in comment 13, Berry and the RWQCB have discussed a reduction in monitoring reporting frequency to quarterly.*

*16) Since the fourth quarter and annual reports have coincident submission dates, a combined annual and fourth quarter report would facilitate both timely production of the report by the discharger and review by the RWQCB. Therefore combined fourth quarter and annual monitoring reporting for results is requested.*

**C. Discharge Monitoring Reports (DMRs) – Not Applicable**

**D. Other Reports**

1. Within **60 days** of permit adoption, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, adopted 2 March 2000 by the State Water Resources Control Board. All peaks identified by analytical methods shall be reported.
2. **Annual Operations Report.** By **30 January** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:
  - a. The names and general responsibilities of all persons employed at the Facility.
  - b. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations.
  - c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
  - d. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the

monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.