

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

REVISED MONITORING AND REPORTING PROGRAM NO. 98-153
FOR
SIERRA PACIFIC INDUSTRIES, INC.
HAZEL CREEK MINE SITE
EL DORADO COUNTY

The Hazel Creek Mine was closed in 1999 in accordance with Waste Discharge Requirements (WDRs) Order No. 98-153, Title 27 regulations, and a 1998 Final Closure Plan. As part of closure, tailings piles along Hazel Creek were removed and consolidated into a single closure unit (a closed Group B waste pile under 27 CCR Section 22510(j)) constructed in an adjacent area above the flood plain. The tailings were also treated prior to closure to buffer their mild acid-generating potential (see WDR Findings 14 through 21). Since closure of the mine in 1999, no leachate seeps have been observed from the closure unit, and no impacts to Hazel Creek have been detected in semiannual surface water monitoring conducted by the Discharger under Monitoring and Reporting Program (MRP) No. 98-153.

This revised monitoring and reporting program (MRP) eliminates surface water sampling from the detection monitoring program (DMP), but retains the requirement that the Discharger visually monitor the facility and onsite surface waters for evidence of a release. The revised MRP also retains the requirement of that the Discharger conduct surface water sampling in the event that visual monitoring indicates evidence of a release. The revisions to the MRP are based on the following circumstances:

1. A reduced water quality threat from the wastes as a result of mine closure;
2. The absence of any release involving damage to, or seepage from, the unit since mine closure;
3. The expectation that any potential release from the closure unit would involve drainage or seepage from the cover and would be visually detectable; and
4. The problematic nature of surface water monitoring for detecting a release where there are significant dilution flows.

The MRP revisions are intended to eliminate unnecessary monitoring costs, while ensuring that the detection monitoring program meets Title 27 performance standards (i.e., provides the best assurance of the earliest possible detection of a release from the unit). The revised detection monitoring program herein represents a 27 CCR Section 20080(b) engineered alternative to the Section 20420 prescriptive standards required for a mining unit under Sections 22500 and 20385(a)(1).

This MRP is issued pursuant to California Water Code Section 13267. Compliance with this MRP, and the August 1997 Standard Provisions and Reporting Requirements (SPRR), is ordered by Waste Discharge Requirements Order No. 98-153. Failure to comply with this Program, or with the SPRR, constitutes noncompliance with the WDRs and the Water Code, which can result in the imposition of civil monetary liability.

A. SUMMARY OF REPORTING & MONITORING FREQUENCIES

| <i>Section</i> | | <i>Frequency</i> |
|----------------|-------------------------------------|---------------------------|
| | <i>Monitoring:</i> | |
| C. | Detection Monitoring (visual only) | |
| | 1. Leachate Seeps | Quarterly |
| | 2. Surface Water | Quarterly |
| D. | Facility Monitoring | |
| | 1. Standard Observations | Quarterly |
| | 2. Regular Maintenance Inspections | Quarterly |
| | 3. After Significant Storm Events | Within 7 Days After Event |
| | 4. Site Winterization | Annually |
| | <i>Reporting:</i> | |
| E. | 1. Semiannual Report | Semiannually |
| | 2. Annual Monitoring Summary Report | Annually |

B. WATER QUALITY PROTECTION STANDARD (Section 20390)

The Water Quality Protection Standard shall consist of all Constituents of Concern, Concentration Limits for each constituent of concern, Monitoring Points, Point of Compliance, and the Compliance Period.

1. Constituents of Concern (Section 20395 of Title 27)

The constituents of concern (COCs) include all the waste constituents, their reaction products, and hazardous constituents that are reasonably expected to be in, or derived from, waste contained in the Unit. The COCs for the facility are listed in Section C.1 herein.

2. Concentration Limits (Section 20400)

In the event of a release from the unit, the discharger shall develop concentration limits for each affected media, as applicable. Surface water concentration limits shall be based on background monitoring of Hazel Creek immediately upstream of the closure unit, and, if statistically based, shall include historical monitoring data.

Statistically Based Limits

For COCs for which at least 10% of the data from background samples equal or exceed their respective MDL, the concentration limit shall be determined as follows:

- By either the Tolerance Interval or Prediction Interval statistical procedure applied to background data, and/or
- Using an alternative statistical method approved by the Executive Officer in accordance with Section 20415(e)(8)(E).

Statistical concentration limits shall be updated as necessary to reflect current background conditions and shall take into account any seasonality in the data.

Non-statistically Based Limits

- a. For COCs for which less than 10% of the data from background samples equal or exceed their respective MDL, the concentration limit shall be the PQL.
- b. In lieu of statistically based limits, concentration limits for COCs in Hazel Creek may be based on upstream monitoring data obtained concurrently with (i.e., during the same sampling event as) down stream monitoring data.

3. Monitoring Points (Section 20405)

In the event of a release from the unit, the discharger shall propose monitoring points for each affected media, as applicable. Surface water monitoring points shall include locations in Hazel Creek immediately upstream and downstream of the closure unit.

4. Point of Compliance (Section 20405)

The point of compliance for groundwater shall be a vertical surface located at the hydraulically down gradient limit of the Unit that extends through the uppermost aquifer underlying the Unit. The point of compliance for surface water shall be the monitoring point in Hazel Creek immediately down gradient of the closure unit.

5. Compliance Period (Section 20410)

The compliance period for each unit shall be the number of years equal to the active life of the unit plus the closure period. The compliance period is the minimum period during which the Discharger shall conduct a water quality monitoring program subsequent to a release from the unit. The compliance period shall begin anew each time the Discharger confirms a new release from the unit. Since the mine was last re-activated in 1984 and closed in 1999, the compliance period is 15 years (i.e., 14-year active life + 1 year closure period).

C. DETECTION MONITORING

1. Leachate Seeps

The Discharger shall visually monitor the closed mine unit (including toe area) for leachate seeps as part of standard observations. Any leachate seeps observed during these inspections or at any other time shall be sampled and analyzed for the COCs referenced in the following table.

**CONSTITUENTS OF CONCERN &
APPROVED USEPA ANALYTICAL METHODS**

| Field Parameters | USEPA Test Method |
|-------------------------|--------------------------|
| pH | ---- |
| Specific conductance | ---- |
| Temperature | ---- |
| Turbidity | ---- |

General Minerals

| | |
|------------------------------|-------|
| Total Dissolved Solids (TDS) | 2540C |
| Total Alkalinity | 2320B |
| Total Hardness | 2340B |
| Total Organic Carbon (TOC) | 415.1 |

Major Anions

| | |
|--------------------|------------------|
| Bicarbonate | 2310B |
| Chloride | 300 (anion scan) |
| Nitrate – Nitrogen | 300 (anion scan) |
| Sulfate | 300 (anion scan) |

Major Cations

| | |
|-----------|------------|
| Calcium | 200.7/6010 |
| Magnesium | 200.7/6010 |
| Potassium | 200.7/6010 |
| Sodium | 200.7/6010 |

Dissolved Inorganics¹

| | |
|---------------------|-------------|
| Aluminum | 200.7/6010 |
| Antimony | 200.7/6010 |
| Arsenic | 200.9/200.8 |
| Barium | 200.7/6010 |
| Beryllium | 200.7/6010 |
| Cadmium | 200.7/6010 |
| Chromium | 200.7/6010 |
| Hexavalent Chromium | 7199/1636 |
| Cobalt | 200.7/6010 |
| Copper | 200.7/6010 |
| Cyanide | 335.4/9010 |
| Iron | 200.7/6010 |
| Lead | 200.9/200.8 |
| Manganese | 200.7/6010 |
| Mercury | 7470A |
| Molybdenum | 200.7/6010 |
| Nickel | 200.9/200.8 |
| Selenium | 200.9/200.8 |
| Silver | 200.7/6010 |
| Sulfide | 9030 |
| Thallium | 200.7/6010 |
| Tin | 200.7/6010 |
| Vanadium | 200.7/6010 |
| Zinc | 200.7/6010 |

1. Samples shall be filtered prior to performing dissolved inorganics analysis.

2. **Surface Waters**

As part of standard observations, the Discharger shall visually monitor Hazel Creek and all onsite surface drains and wetlands for evidence of a release (e.g., leachate, turbidity).

In the event that physically significant evidence of a release from the unit is observed, the Discharger shall follow applicable *RESPONSE TO RELEASE provisions* of the SPRR, including notification of the release, sampling of all affected media (including Hazel Creek) for COCs, evaluation monitoring, and submission of a preliminary engineering feasibility study (EFS) report.

D. **FACILITY MONITORING**

1. **Standard Observations**

Standard Observations shall be performed **quarterly** during both the wet season (October 1 to April 30) and dry season (May 1 to September 30) and shall include those elements identified in Definition 24 of the Standard Provisions.

Documentation of Standard Observations shall include field logs, and relevant photographs, which may be kept in electronic form rather than hard copy.

2. **Regular Maintenance Inspections**

Landfill facilities shall be inspected **quarterly** to identify the need for maintenance and repairs. Necessary repairs shall be completed within 30 days of each inspection. Field logs of these inspections and documentation of the repairs shall be included in each semiannual monitoring report.

3. **After Storm Events**

Within seven days following each significant storm event (i.e. one which produces 2.0 inches or more of precipitation within a 24-hour period, as measured at the Sly Park Station), the Discharger shall inspect the landfill cover and precipitation and drainage facilities for damage. Areas of erosion or sedimentation observed during the inspection(s) shall be flagged and repaired within seven days of identification. If repairs cannot be completed within the seven-day time frame, the Discharger shall notify the Regional Board of such and provide a schedule for completing necessary repairs. Findings and repairs implemented as a result of these inspections shall be included in each semiannual monitoring report. If no inspection was conducted because there was no significant storm event during the semiannual period, the report shall state such fact.

4. **Site Winterization**

Annually, prior to the anticipated rainy season, but no later than **30 September**, the Discharger shall conduct an inspection of the facility for the purpose of winterizing the site. The inspection shall identify any damage to the closure unit cover, grade, precipitation and drainage controls, access roads and other closure unit facilities. Any necessary construction, maintenance, or repairs to these facilities shall be completed by **31 October**. The Discharger shall document the

results of the winterization inspection and any repair measures implemented in the Annual Monitoring Summary Report (see Section E.2.b).

Documentation of the results of the above inspections and any repairs implemented shall include field observations, the location of any damage observed (i.e. on a site map), photographs of the damage, and a description of any repairs implemented, including post-repair photographs.

E. REPORTING

1. Semiannual Reports

The Discharger shall report monitoring data and information as required in this Monitoring and Reporting Program and as required under Order No. 98-153 and the August 1997 Standard Provisions and Reporting Requirements (SPRR). Reports shall be submitted **semiannually** by **31 January** and **31 July** of each year. Each semiannual monitoring report shall include the following information:

- a. A compliance evaluation summary for the monitoring period, including all applicable information specified in Requirement 2, *Reports to be Filed with the Board, REPORTING REQUIREMENTS, SPRR*;
- b. All other required facility monitoring information, including:
 - i. The results of monitoring for physical evidence of a release, as specified in Section C herein and in accordance with Requirement 2, *Reports to be Filed with the Board, REPORTING REQUIREMENTS, SPRR*. This information shall include the discharger's immediate response to any detected seeps, laboratory results of any samples taken, and corrective action measures in progress or planned;
 - ii. Documentation and certification of completion of all standard observations, including all field logs and photographs, as specified in Section D.1 herein;
 - iii. The results of regular maintenance inspections, as specified in Section D.2 herein; and
 - iv. The results of inspections conducted following significant storm events, as specified in Section D.3 herein.
- c. An electronic copy of the report, including transmittal letter, and items referenced in E.1.a and E.1.b above, submitted in PDF format on 3.5-inch floppy disk or compact disk (CD).

2. Annual Monitoring Summary Report

An Annual Monitoring Summary Report (Annual Report) shall also be prepared and submitted by **31 January** of each year. The Annual Report shall summarize monitoring results for the prior year and include a discussion of compliance with the WDRs and the Water Quality Protection Standard. At a minimum, the Annual Report shall include the following information:

- a. A comprehensive discussion of the compliance record and all other applicable information specified in Requirement 4, *Reports to be Filed with the Board, REPORTING REQUIREMENTS*, SPRR; and
- b. The results of winterization inspections and a description of construction, maintenance, and repairs implemented during the year to winterize the site, as specified in Section D.4 herein.
- c. A summary of the results of leachate and facility monitoring conducted during the year and as reported in the semiannual reports.
- d. An electronic copy of the report, including items referenced in E.2.a through E.2.c above, submitted on electronic disk as described in Section E.1.c.

The Annual Report, including electronic copy, may be included in the Second Semiannual Report submitted by **31 January** each year under Section E.1.

Reports that do not comply with the above-required format will be **REJECTED** and the Discharger shall be deemed to be in noncompliance with the waste discharge requirements.

The semiannual and annual reports shall be submitted to the Board in accordance with the following schedule for the calendar period in which samples were taken or observations made:

| <u>Report</u> | <u>End of Reporting Period</u> | <u>Date Report Due</u> |
|-------------------|--------------------------------|------------------------|
| First Semiannual | 30 June | 31 July |
| Second Semiannual | 31 December | 31 January |
| Annual Report | 31 December | 31 January |

The transmittal letter accompanying monitoring reports submitted under this Order shall, as required under the Standard Provisions (*Provision 5, General Requirements, REPORTING REQUIREMENTS*), contain a statement by the discharger, or the discharger's authorized agent, under penalty of perjury, that to the best of the signer's knowledge the report is true, accurate and complete.

The Discharger shall implement the above monitoring program on the effective date of this Program.

Ordered by: _____ original signed by _____
PAMELA C. CREEDON, Executive Officer

_____ 11 September 2007 _____

(Date)