ORDER No. R1-2017-0046
NPDES PERMIT No. CA0025143

WDID No. 1B06008NMEN

WASTE DISCHARGE REQUIREMENTS
For WILLITS ENVIRONMENTAL REMEDIATION TRUST
and
CITY of WILLITS
PAGE PROPERTY
MENDOCINO COUNTY

Table 1. Discharger Information

Discharger	**Willits Environmental Remediation Trust and City of Willits**
Name of Facility	**Page Property**
Facility Address	**3920 Canyon Road**
	Willits, California
	Mendocino County
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as **a minor discharge**	

The Dischargers are authorized to discharge from the following discharge points as set forth below:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Treated Groundwater	39°25′56″	N123°18′11″	Darby Creek

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	**December 13, 2017**
This Order shall become effective on:	**January 1, 2018**
This Order shall expire on:	**December 31, 2022**
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as	**June 30, 2022**

application for issuance of new waste discharge requirements no later than:	

IT IS HEREBY ORDERED, that in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Dischargers shall comply with the requirements established herein.

I, Matthias St. John, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, North Coast Region, on **December 13, 2017.**

_____
Matthias St. John, Executive Officer

Contents

Tables

Attachments

I. FACILITY INFORMATION

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

Table 4. Facility Information

Discharger	Willits Environmental Remediation Trust (WERT) and City of Willits
Name of Facility	Page Property
Facility Address **Facility Contact, Title and Phone** **Mailing Address**	3920 Canyon Road Willits, CA 95490 Mendocino County
	Willits Environmental Remediation Trust 692 Russell Drive Folsom, CA 95630 Granite Bay, CA 95746 Anne Farr, Trustee, (916) 805-5856 City of Willits 111 East Commercial Street Willits, CA 95490 Adrienne Moore, (707) 459-7120
Type of Facility	Former Burn Dump/Chromic Acid Disposal Pits
Facility Design Flow	Up to 29,000 Gallons Per Day

II. FINDINGS

The California Regional Water Quality Control Board, North Coast Region (hereinafter Regional Water Board), finds:

A. Background. On July 29, 2016, the Willits Environmental Remediation Trust submitted a Report of Waste Discharge for reissuance of the Waste Discharge Requirements Order No. R1-2012-0026 which also serve as an NPDES Permit No. CAG9111001. The Waste Discharge Requirements and NPDES permit authorize the Willits Environmental Remediation Trust (WERT) to collect groundwater contaminated with hexavalent chromium in an extraction trench, treat the groundwater and discharge highly treated groundwater to Darby Creek, a tributary of the Eel River, as well as to evaporate and/or spray irrigate the highly treated groundwater on the City of Willits property ("Former Landfill").

The Willits Environmental Remediation Trust (WERT) is an independent instrumentality of the United States District Court for the Northern District of California, as established pursuant to the Amended Final Consent Decree, Final Order, and Final Judgment; And Order Establishing the WERT, entered by Judge Susan Illston (N.D. CA, Case No. C96-0283SI) on December 22, 2000 (the Consent Decree). The WERT was established in part to completely, timely and cost-effectively conduct all investigatory and remedial work at the Remco Facility located at 934 South Main Street in Willits, California (Remco Facility) and surrounding areas in and around the City of Willits where hazardous substances associated with the Remco Facility operations have come to be located. The Page Property located at 3920 Canyon Road in Willits is where wastes from the Remco Facility are located. The WERT is investigating, and cleaning up those wastes.

In the 1940s, the City of Willits acquired 2.4 acres of land for use as a municipal landfill on the

Page Property. The municipal landfill was operated by Wilson Page on behalf of the City of Willits. The City of Willits is still the current landowner of the property. Therefore, the Willits Environmental Remediation Trust and City of Willits are hereinafter referred to as Dischargers.

B. Facility Description. The Facility is a former municipal burn dump that operated from the 1940s to 1970. The burn dump is a 2.4 acre parcel located on the Page Property and operated by Wilson Page on behalf of the City of Willits. In the late 1960s, industrial wastes, including chromic acid generated from the Remco Facility, were collected and disposed at the former burn dump. Wastes from the Remco Facility were initially disposed onto the operating burn dump located on a hillside. In early 1970, disposal ponds were constructed and industrial wastes were disposed into ponds constructed on the property. In late 1973, Regional Water Board staff prohibited the disposal of industrial wastes to the burn dump. From 1974 to the mid-1980s, septage was disposed into the disposal ponds.

The burn dump is located on a hillside with Darby Creek flowing at the base of the hillside. Darby Creek is a tributary to Outlet Creek and the Eel River. During winter months, rainfall flows through the permeable soils and wastes of the former burn dump and emerges as a spring at the base of the hill. In addition, a groundwater to surface water discharge to Darby Creek occurs at the site. Historic sampling of the spring found hexavalent chromium at concentrations up to 1,650 µg/L (ppb). Contaminated groundwater and the spring discharges to Darby Creek resulted in hexavalent chromium detected up to 18 µg/L in the Creek. Currently, the levels of hexavalent chromium in Darby Creek are below the reporting limit of 1 µg/L.

In 2006, a groundwater extraction trench was constructed at the base of the former landfill where contaminated groundwater emerges from the side of the hill. The extraction trench collects groundwater which is pumped to the top of the hill where it is treated to nondetectable levels. The highly treated groundwater is spray irrigated onto land owned by the City of Willits. The land irrigation is the primary disposal of the highly treated groundwater. The discharge of highly treated groundwater to Darby Creek is a backup disposal plan, if irrigation to land cannot occur. To date, no discharge to Darby Creek has occurred. The treatment system consists of a filter to remove sediment, granular activated carbon to remove contaminants, and a holding tank to meter the discharge. This NPDES Permit prohibits the discharge to Darby Creek from May 15 to September 30.

Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. Legal Authorities. This Permit is issued pursuant to CWA Section 402 and implementing regulations adopted by the U.S. EPA and the CWC, Division 7, Chapter 5.5. It shall serve as a NPDES permit for point source discharges of highly treated groundwater to surface waters. This Permit shall also serve as Waste Discharge Requirements (WDRs) pursuant to the CWC, Division 7, Article 4, Chapter 4 for discharges that are not subject to regulation under CWA Section 402.

D. Background and Rationale for Requirements. The Regional Water Board developed the requirements of this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. Attachments A - F, which contain background information, rationale for Order Requirements, and Order requirements, are hereby incorporated into this Order and, thus, constitute part of this Order.

E. California Environmental Quality Act (CEQA). This Order serves as both an NPDES permit for discharges to waters of the U.S. and as WDRs for discharges to waters of the state (the land discharges). The Regional Water Board's responsibilities under CEQA differ for NPDES-related discharges and WDR-related discharges.

Pursuant to Water Code section 13389, an action to adopt an NPDES permit is exempt from the provisions of CEQA contained in Public Resources Code sections 21100-21177. Accordingly, this exemption from CEQA applies to the Regional Water Board's actions to adopt those portions of the Order that regulate NPDES-discharges.

Similarly, the Regional Water Board's action in approving those parts of the Order that regulate WDR-related discharges is exempt from CEQA as an existing facility with no expansion of use beyond that existing at the time of the lead agency's determination pursuant to Title 14, California Code of Regulations (CCR), Section 15301.

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, 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. There are no applicable Effluent Limitations Guidelines (technology-based limitations established by the US EPA) for groundwater pump-and-treat systems. Technology-based requirements of the General Permit have been established using Best Professional Judgment (BPJ) in accordance with Code of Federal Regulations, section 125.3.

G. **Water Quality-Based Effluent Limitations**. NPDES regulations at 40 CFR 122.44 (d) require permits to include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of receiving waters. Where numeric water quality objectives have not been established, in accordance with 40 CFR 122.44 (d), WQBELs may be established using calculated numeric water quality criteria; using U.S. EPA water quality criteria established under CWA Section 304 (a); or using indicator parameters for the pollutants of concern.

H. **Water Quality Control Plans**. The Regional Water Board adopted a Water Quality Control Plan for the North Coast Region (the 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. Beneficial uses are designated for all waters of the North Coast Region and are designated for coastal and inland waters, wetlands, and groundwaters. Beneficial uses of any water body specifically identified in the Basin Plan generally apply to its tributary streams:

The Basin Plan identifies the following existing and potential beneficial uses for Outlet Creek, a tributary of the Eel River.

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Eel River	Existing: MUN – Municipal and Domestic Supply AGR – Agricultural Supply IND – Industrial Service Supply GWR – Groundwater Recharge FRSH – Freshwater Replenishment NAV – Navigation REC1 – Water Contact Recreation REC2 – Non-Contact Water Recreation COMM – Commercial and Sport Fishing COLD – Cold Freshwater Habitat WILD – Wildlife Habitat RARE – Preservation of Rare, Threatened, or Endangered Species MIGR – Migration of Aquatic Organisms SPWN – Spawning, Reproduction, and/or Early Development
		Potential: PRO – Industrial Process Supply POW – Hydropower Generation AQUA – Aquaculture
	Groundwater	Existing MUN – Municipal and Domestic Supply AGR – Agricultural Supply IND – Industrial Service Supply FRSH – Freshwater replenishment to Surface Waters CUL – Native American Culture Potential: PRO – Industrial Process Supply AQUA – Aquaculture

The State Water Resources Control Board (State Board) adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

The North Coast Regional Water Board Basin Plan includes the policy for the Implementation of the Water Quality Objectives for Temperature (Temperature Implementation Policy), which specifies that activities resulting in water temperature increases shall be addressed on a case-by-case basis to reduce impairments and prevent further impairment. The Temperature Implementation Policy directs staff to examine and address temperature when developing permits. At a minimum, any program or permit should implement temperature shade load allocations in areas subject to existing temperature total maximum daily loads (TMDLs), including EPA-established temperature TMDLs. To attain and maintain the water quality objectives for temperature, the Regional Water Board and its staff will implement programs and collaborate with others in such a manner as to prevent, minimize, and mitigate temperature alterations

associated with sediment discharges and controllable water quality factors. Controllable water quality factors affecting water temperature include any anthropogenic activity which results in the removal of riparian vegetation, sediment discharges, impoundments and other channel alterations, reduction of instream summer flows, and the reduction of cold water sources. The Temperature Policy requires program implementation through adoption of WDRs.

Existing beneficial uses of the Eel River and its tributaries include cold fresh water habitat. The natural receiving water temperature of the Eel River and its tributaries shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall the temperature of any COLD water be increased by more than 5°F above natural receiving water temperature.

Requirements of this Order protect all receiving water beneficial uses and specifically implement the applicable water quality control plans, described above.

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 40 criteria in the NTR are applicable to discharges 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 General Permit implement the SIP.

K. Compliance Schedules and Interim Requirements. 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 May 18, 2010 to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation 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. The Permit does not include compliance schedules or interim effluent limitations.

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. **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 incorporates 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.

N. **Anti-Backsliding Requirements**. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 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 General Permit are less stringent than those in Order No. 2006-0067. As discussed in detail in the Fact Sheet this relaxation of effluent limitations is consistent with the antibacksliding requirements of the CWA and federal regulations.

O. **Endangered Species Act**. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the State. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

P. **Monitoring and Reporting**. NPDES regulations at 40 CFR 122.48 require that all NPDES permits specify requirements for recording and reporting monitoring results. CWC Sections 13267 and 13383 authorize the Regional Board to require technical and monitoring reports. The attached monitoring and reporting program (MRP) (Attachment E) establishes monitoring and reporting requirements to implement federal and State requirements.

Q. **Standard and Special Provisions**. Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR 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 Fact Sheet.

R. **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 the notification are provided in the Fact Sheet of this Order.

S. **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.

T. **Provisions and Requirements Implementing State Law**. The provisions/requirements in subsections V.B of this Order and section E of the Monitoring and Reporting Program 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.

III. DISCHARGE PROHIBITIONS

A. The discharge of any waste, including highly treated groundwater and purge waters extracted from the site and treated, is prohibited unless the discharge is regulated by an NPDES permit or is discharged to a permitted facility.

B. The discharge of treated groundwater to Darby Creek containing inorganic constituents in excess of the background level in the receiving water is prohibited.

C. The discharge from the treatment Facility of detectable levels of the organic constituents listed in the Tables E-8 and E-9 attached to this Order is prohibited. For purposes of this Order, the Minimum Level of detection shall be those listed in the Tables E-8 and E-9 included in Monitoring and Reporting Program No. R1-2017-0046 (Attachment E).

D. The discharge of treated groundwater to land containing inorganic constituents in excess of the background levels in groundwater is prohibited.

E. The discharge to land of highly treated water containing hexavalent chromium is prohibited.

F. Creation of pollution, contamination, or nuisance, as defined by CWC Section 13050 is prohibited [Health and Safety Code, Section 5411].

G. The discharge of extracted and treated groundwater/purge waters in excess of 29,000 gallons per day (gpd) is prohibited.

H. Bypass or overflow of untreated or partially treated groundwater to waters of the State from the treatment system or from the collection and transport systems or from pump stations tributary to the treatment system is prohibited.

I. The discharge of waste to land that is not owned by or subject to an agreement for use by the Dischargers is prohibited.

J. The discharge of treated groundwater/purge waters from the treatment system to the Eel River or its tributaries is prohibited during the period May 15 through September 30 of each year.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Pollutants with Effluent Limitations Established by the Order

1. Organic pollutants[1] listed in Tables E-8 and E-9 shall not be discharged at detectable concentrations.
2. Hexavalent chromium shall not be discharged at detectable concentrations.
3. Inorganic pollutants[2] that are naturally occurring shall not be discharged at levels that exceed background in the receiving water.
4. **Acute toxicity**. There shall be no acute toxicity in treated effluent discharged to Darby Creek. Dischargers shall be in compliance with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted effluent complies with the following:
   - **a.** Minimum for any one bioassay: 70 percent survival; and
   - **b.** Median for any three or more consecutive bioassays: at least 90 percent survival.

[1] The specific minimum detection requirements for laboratory analysis and reporting for all organic and inorganic pollutants are presented in Tables E-8 and E-9 attached to Monitoring and Reporting Program No. R1-2012-0026 (Attachment E).

Compliance with this effluent limitation shall be determined in accordance with Section V. A of the Monitoring and Reporting Program (MRP – Attachment E to the Permit).

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. Receiving water conditions not in conformance with the limitation are not necessarily a violation of this Order. Compliance with receiving water limitations shall be measured at monitoring locations described in the MRP (Attachment E). The Regional Water Board may require an investigation to determine cause and culpability prior to asserting that a violation has occurred.

1. Discharges from the Facility shall not cause the following in the receiving water: Unless more stringent water quality objective for dissolved oxygen are established, the waste discharge shall not cause the dissolved oxygen concentration of the receiving waters to be depressed below 7.0 mg/L at any time nor below 9.0 mg/L during critical spawning and egg incubation periods. In the event that the receiving waters have background dissolved oxygen concentrations of less than these levels, discharges shall not depress dissolved oxygen concentrations below existing levels.
2. Unless more stringent water quality objectives for pH are established, the discharge shall not cause the pH of the receiving waters to be depressed below 6.5 nor raised above 8.5. The discharge shall not cause receiving water pH to change more than 0.5 units at any time.
3. The discharge shall not cause the turbidity of the receiving waters to be increased more than 20 percent above naturally occurring background levels.
4. The discharge shall not cause the receiving waters to contain floating materials, including, but not limited to, solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses.
5. The discharge shall not cause the receiving waters to contain taste or odor producing substances in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, that cause nuisance, or that adversely affect beneficial uses.
6. The discharge shall not cause coloration of the receiving waters that causes nuisance or adversely affects beneficial uses.
7. The discharge shall not cause bottom deposits in the receiving waters to the extent that such deposits cause nuisance or adversely affect beneficial uses.
8. The discharge shall not cause or contribute to receiving water concentrations of biostimulants that promote objectionable aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses of the receiving waters.
9. The discharge shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses of receiving waters.
10. The discharge shall not cause the receiving waters to contain toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the Regional Water Board.

11. Discharges shall not cause alteration of natural temperature of receiving waters unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall discharges cause temperature to increase more than 5º F above natural receiving water temperature.

12. The discharge shall not cause an individual pesticide or combination of pesticides to be present in concentrations that adversely affect beneficial uses. There shall be no bioaccumulation of pesticide concentrations found in bottom sediments or aquatic life as a result of the discharge.

13. The discharge shall not cause receiving waters to contain concentrations of pesticides in excess of Maximum Contaminant Levels (MCLs) established for these pollutants in title 22, division 4, chapter 15, articles 4 and 5.5 of the CCR.

14. The discharge shall not cause the receiving waters to contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water that cause nuisance or that otherwise adversely affect beneficial uses.

15. This discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Regional Water Board or the State Water Board as required by the CWA and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with the more stringent standards.

16. The discharge shall not substantially contribute to exceedances of water quality objectives for specific waters of the North Coast Region that are established in Table 3-1 of the Basin Plan for specific conductance, total dissolved solids, hardness, and boron. In the event that receiving waters have background conditions for these parameters at levels that already exceed water quality objectives, dischargers shall not cause or contribute to a further exceedance of existing conditions.

17. The discharge shall not cause concentrations of chemical constituents to occur in excess of MCLs established for these pollutants in title 22, division 4, chapter 15, articles 4 and 5.5 of the CCR.

B. Groundwater Limitations

1. The collection, treatment, storage, and disposal of treated groundwater shall not cause a statistically significant degradation of groundwater quality unless a technical evaluation is performed that demonstrates that any degradation that could reasonably be expected to occur, after implementation of all regulatory requirements (e.g., title 27 of the CCR) and reasonable best management practices (BMPs), will not violate groundwater quality objectives or cause impacts to beneficial uses of groundwater.

2. The collection, treatment, storage, and disposal of treated groundwater shall not cause alterations of groundwater that contain chemical concentrations in excess of limits specified in title 22, division 4, chapter 15, article 4, sections 64435 (Tables 2 and 3) and 64444, and the Basin Plan.

3. The collection, treatment, storage, and disposal of treated groundwater shall not cause groundwater to contain radionuclides in excess of the limits specified in title 22, division 4, chapter 15, article 5, section 64443 of the CCR.

4. The collection, treatment, storage, and disposal of treated groundwater shall not cause groundwater to contain taste - or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.

VI. PROVISIONS

A. Standard Provisions

1. Federal Standard Provisions. The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. Regional Water Board Standard Provisions.

   a. Authorization to discharge under this Order may be terminated for reasons which include, but are not limited to, the following.

      i. Violation of any term or condition contained in this Order;

      ii. Obtaining authorization to discharge under the Order by misrepresentation or failure to fully disclose relevant information;

      iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;

      iv. A change in the groundwater treatment system to a configuration that is not eligible for coverage under this Order;

      v. The discharge is endangering human health or the environment.

   b. The Regional Water Board may review and revise this Permit at any time upon application by any person, or on the Regional Water Board's own motion.

   c. If any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under the federal CWA at Section 307 (a) for a toxic pollutant which is present in the discharge and that standard or prohibition is more stringent than any limitation for the pollutant in this Permit, this Permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition and the Permittee so notified.

   d. The Executive Officer may modify or revoke authorization to discharge under this Permit if it is determined that the Permittee is causing or significantly contributing to adverse impacts to the water quality and/or beneficial uses of receiving waters. In the event that the Regional Water Board's interpretation of the narrative toxicity objective is modified or invalidated by the Regional Water Board, a court decision, or a State statue or regulation, this Permit may be revised to be consistent with the decision, statue, or regulation.

   e. In addition, the Regional Water Board may consider revising this Permit to make it consistent with any Regional Water Board decisions arising from various petitions for rehearing, and litigation concerning the State Implementation Plan, 303 (d) list, and TMDL Program.

   f. Availability. A copy of this Permit shall be maintained at the discharging Facility and be available at all times to operating personnel.

   g. Change in Discharge. At least 180 days prior to an expected material change in the character, location, or volume of a discharge, the Permittee shall file with the Regional Water Board a revised report of waste discharge. A material change includes, but is not limited to, moving the discharge to another drainage area, to a different water body, or

to a disposal area, significantly removed from the original area, potentially causing different water quality or nuisance problems.

h. Monitoring and Reporting. The Regional Water Board or State Water Board may require the Permittee to establish and maintain records, make reports, install, use, and maintain monitoring equipment or methods (including, where appropriate, biological monitoring methods), sample effluent as prescribed, and provide other information as may be reasonably required.

The Permittee shall file with the Regional Water Board technical reports on self monitoring work performed according to the detailed specifications contained in any monitoring and reporting program as directed by the Regional Water Board.

Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer. In the event a certified laboratory is not available to the Permittee, analyses performed by a non-certified laboratory will be accepted, provided:

i. A quality assurance/ quality control program is instituted by the laboratory, and a manual containing the steps followed in this program is kept in the laboratory and made available for inspection by representatives of the Regional Water Board. The quality assurance/quality control program must conform to U.S. EPA or State Department of Health Services guidelines.

ii. The laboratory will become certified within the shortest practicable time if the State certification program is resumed.

All Discharge Monitoring Reports shall be uploaded to the State Water Resources Control Board's Geographical Environmental Information Management System online database (Geotracker, http://geotracker.waterboards.ca.gov/)

i. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Dischargers to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

j. The Dischargers shall immediately cease any discharge authorized by this Order in the event there is a violation or threatened violation of this General Permit, or if the Executive Officer so orders. The Dischargers must notify Regional Water Board staff orally, as soon as reasonably possible, with a written confirmation within a week, when a violation of this Order is known to exist. The Discharge may not be resumed until authorized in writing by the Executive Officer.

k. In the event the Dischargers do not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the

Discharger shall notify the Regional Water Board orally[2] 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 state the nature, time, duration, and cause of noncompliance and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

l. Transfers. This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Dischargers and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); § 122.61.).

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

a. Standard Revisions. If applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, the Regional Water Board may reopen this Order and make modifications in accordance with such revised standards.

b. Reasonable Potential. This Order may be reopened for modification to include an effluent limitation if monitoring establishes that the discharge causes, has the reasonable potential to cause, or contributes to an excursion above an applicable water quality objective.

c. Whole Effluent Toxicity (WET). As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation and/or a limitation for a specific toxic pollutant identified by a TRE or if there is a change in the WET compliance method pursuant to changes in State wide policy. In addition, if a numeric water quality objective for chronic toxicity is adopted by the State Water Board, this Order may be reopened to include an effluent limitation for chronic toxicity based on that objective.

d. 303 (d)-Listed Pollutants. If a new TMDL is adopted and is applicable to receiving waters for this discharge, this Order may be reopened to incorporate requirements of the TMDL.

e. Biostimulatory Substances. This Order contains effluent limitations for nitrate. If new water quality objectives for nutrients are established, or if monitoring data indicate the need for more stringent effluent limitations for these or other nutrient

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[2] Oral reporting means direct contact with a Regional Water Board staff person. The oral report may be given in person or by telephone. After business hours, oral contact must be made by calling the State Office of Emergency Services at (800)852-7550 or Regional Water Board spill officer at (707) 696-7179.

parameters, this Order may be reopened and modified to include new or modified effluent limitations, as necessary.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

None required.

3. Best Management Practices and Pollution Prevention

a. Pollution Minimization Plan. The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as "Detected, but Not Quantified" (DNQ) when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of WET, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:

i. A sample result is reported as DNQ and the effluent limitation is less than the reporting level (RL); or

ii. A sample result is reported as not detected (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section X.B.4.

iii. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

(a) An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;

(b) Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;

(c) Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

(d) Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

(e) An annual status report that shall be sent to the Regional Water Board including:

(1) All PMP monitoring results for the previous year;

(2) A list of potential sources of the reportable priority pollutant(s);

(3) A summary of all actions undertaken pursuant to the control strategy; and

(4) A description of actions to be taken in the following year.

4. Construction, Operation and Maintenance Specifications

a. The Dischargers shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Dischargers to achieve compliance with this Order. Proper operation and maintenance includes adequate laboratory quality control and appropriate quality

assurance procedures. This provision requires the operation or backup or auxiliary facilities or similar systems that are installed by the Discharger only when necessary to achieve compliance with the conditions of this Order. (section 122.41 (e))

b. The Dischargers shall maintain an updated Operation and Maintenance (O&M) Manual for the Facility. The Dischargers shall update the O&M Manual, as necessary, to conform to changes in operation and maintenance of the Facility. The O&M Manual shall be readily available to operating personnel onsite. The O&M Manual shall include the following:

i. Description of the treatment plant table of organization showing the number of employees, duties and qualifications and plant attendance schedules (daily, weekends and holidays, part-time, etc.). The description should include documentation that the personnel are knowledgeable and qualified to operate the treatment Facility so as to achieve the required level of treatment at all times.

ii. Detailed description of safe and effective operation and maintenance of treatment processes, process control instrumentation and equipment.

iii. Description of laboratory and quality assurance procedures.

iv. Process and equipment inspection and maintenance schedules.

v. Description of safeguards to assure that, should there be reduction, loss, or failure of electric power, the Discharger will be able to comply with requirements of this Order.

vi. Description of preventive (fail-safe) and contingency (response and cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. These plans shall identify the possible sources (such as loading and storage areas, power outage, waste treatment unit failure, process equipment failure, tank and piping failure) of accidental discharges, untreated or partially treated waste bypass, and polluted drainage.

5. Septage Handling Requirements

This section is not applicable.

6. Special Provisions for Municipal Facilities (POTWs only)

This section is not applicable

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below.

A. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

B. Multiple Sample Data

When determining compliance with an Average Monthly Effluent Limitation (AMEL) 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:

1. 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.

2. 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.

C. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

D. Average Weekly Effluent Limitation (AWEL)

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week.

E. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge (or when applicable, the median determined by subsection B, above, for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

F. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

G. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

H. Six-month Median Effluent Limitation.

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that 180-day period for that parameter. The next assessment of compliance will occur after the next sample is taken. If only a single sample is taken during a given 180-day period and the analytical result for that sample exceeds the six-month median, the discharger will be considered out of compliance for the 180-day period. For any 180-period during which no sample is taken, no compliance determination can be made for the six-month median limitation.

I. Compliance with Single-Constituent Effluent Limitations.

The discharge is out of compliance with the effluent limitation if the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML). The ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specific sample weights, volumes and processing steps have been followed.

J. Compliance with Effluent Limitations Expressed as a Sum of Several Constituents.

The discharge is out of compliance with an effluent limitation that applies to the sum of a group of chemicals (e.g., PCBs) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as non-detect (ND) or Detected, but Not Quantified (DNQ).

K. Multiple Sample Data Reduction.

When determining compliance with an AMEL for priority pollutants and more than one sample result is available in a month, 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:

1. 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.

2. 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.

ATTACHMENT A – DEFINITIONS

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)
Sample results that are less than the reported Minimum Level, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Detection Limits for Purposes of Reporting (DLRs)
Detection Limit for Purposes of Reporting (DLRs) as established by the State Department of Health Services at Title 22 of the California Code of Regulations, section 64445.1.Enclosed Bays. Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. This definition includes but is not limited to: Humboldt Bay, Bodega Harbor, Tomales Bay, Drakes Estero, San Francisco Bay, Morro Bay, Los Angeles Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay.

Estimated Chemical Concentrations
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries and Coastal Lagoons
Waters at the mouths of streams that serve as mixing zones for fresh and ocean waters during a major portion of the year. Mouths of streams that are temporarily separated from the ocean by sandbars shall be considered as estuaries. Estuarine waters will generally be considered to extend from a bay or the open ocean to the upstream limit of tidal action but may be considered to extend seaward if significant mixing of fresh and salt water occurs in the open coastal waters. The waters described by this definition include but

are not limited to the Sacramento-San Joaquin Delta as defined by Section 12220 of the California Water Code, Suisun Bay, Carquinez Strait downstream to Carquinez Bridge, and appropriate areas of the Smith, Klamath, Mad, Eel, Noyo, Russian, San Diego, and Otay Rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters
All surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation
The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation
The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Lowest Observed Effect Concentration (LOEC)
The lowest concentration of an effluent or toxicant that results in adverse effects on the test organism (i.e., where the values for the observed endpoints are statistically different from the control).

Maximum Daily Effluent Limitation (MDEL)
The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median
The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = X(n+1)/2. If n is even, then the median = (Xn/2 + X(n/2)+1)/2 (i.e., the midpoint between the n/2 and n/2+1).

Method Detection Limit (MDL)
The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML)
The Minimum Level is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

No Observed Effect Concentration (NOEC)
The NOEC is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation.

Not Detected (ND)
Those sample results less than the laboratory's MDL.

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Reporting Level (RL)
The ML (and its associated analytical method) used for reporting and compliance determination. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ)
A measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:

x is the observed value;

μ is the arithmetic mean of the observed values; and

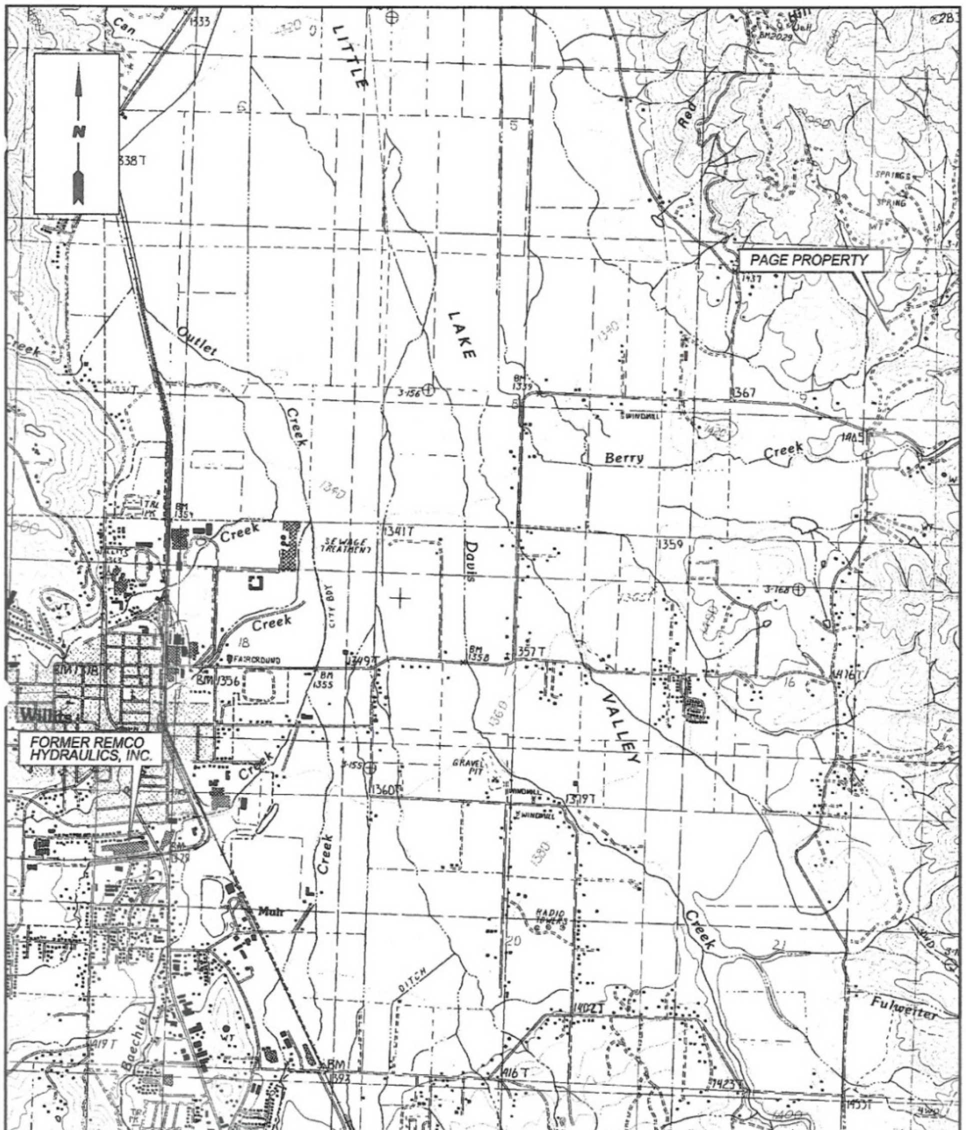
n is the number of samples.

Toxicity Reduction Evaluation (TRE)
A study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of Facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as

part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

Test of Significant Toxicity (TST)
The statistical approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R10-003, 2010). TST was developed by the U.S. Environmental Protection Agency (EPA) for analyzing WET and ambient toxicity data. Using the TST approach, the sample is declared toxic if there is greater than or equal to a 25% effect in chronic tests, or if there is greater than or equal to a 20% effect in acute tests at the permitted instream waste concentration (IWC) (referred to as the toxic regulatory management decision (RMD)). The sample is declared non-toxic if there is less than or equal to a 10% effect at the IWC in acute or chronic tests (referred to as the non-toxic RMD).

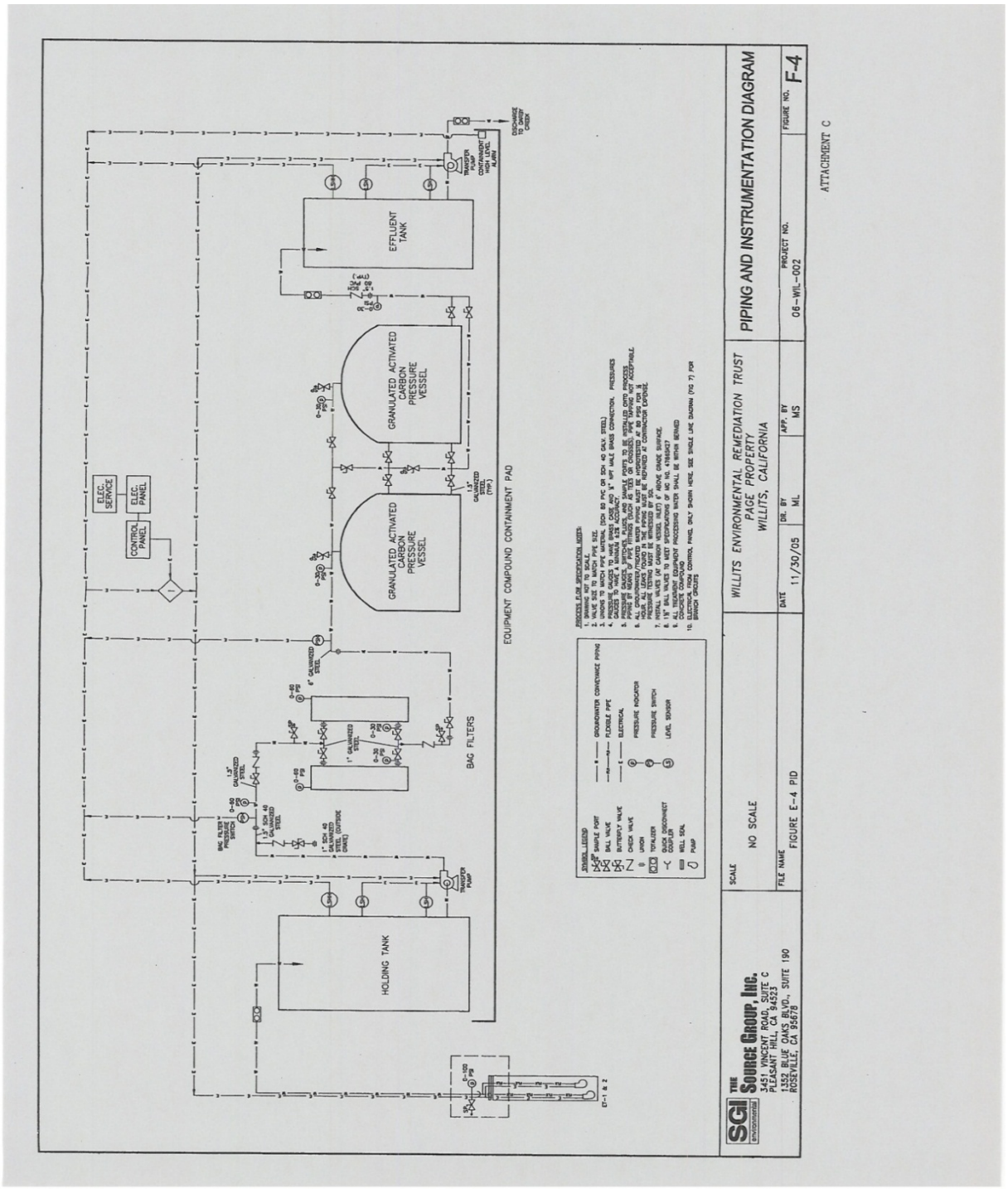
ATTACHMENT B – MAP



THE SOURCE GROUP, INC. 1352 Blue Oaks Blvd., Ste 190 Roseville, CA 95678	TITLE: SITE LOCATION MAP	DATE: 9/23/05
	LOCATION: PAGE PROPERTY MENDOCINO COUNTY, CALIFORNIA	FIGURE: 1-1

ATTACHMENT B

ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Permittee must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

2. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Permittee only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Permittee shall allow the Regional Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(b)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(b); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

G. Bypass

1. Definitions

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)

b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)

2. **Bypass not exceeding limitations.** The Permittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

3. **Prohibition of bypass.** Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and

c. The Permittee submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

4. **Burden of Proof.** In any enforcement proceeding, the Permittee seeking to establish the bypass defense has the burden of proof.

5. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

6. **Notice**

   a. **Anticipated bypass**. If the Permittee knows in advance of the need for a bypass, it shall submit a prior notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)

   b. **Unanticipated bypass**. The Permittee shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)

2. Conditions necessary for a demonstration of upset. A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):

   a. An upset occurred and that the Permittee can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

   b. The permitted Facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));

   c. The Permittee submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and

   d. The Permittee complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)

3. **Burden of proof.** In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Permittee wishes to continue an activity regulated by this Order after the expiration date of this Order, the Permittee must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Permittee and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(l)(3); § 122.61.)

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

B. Monitoring must be conducted according to test procedures under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R., chapter 1, subchapters N or O. Monitoring must be conducted according to sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or required under 40 C.F.R. chapter 1, subchapter N or O. For the purposes of this paragraph, a method is "sufficiently sensitive" when:

1. The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter, and, either the method ML is at or below the level of the applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion, but the amount of the pollutant or pollutant parameter in a facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N or O for the measured pollutant or pollutant parameter.

In the case of pollutants for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

In the case of sludge use or disposal approved under 40 C.F.R. part 136, monitoring must be conducted according to test procedures in part 503 unless otherwise specified in 40 C.F.R. or other test procedures have been specified in this Order.

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

1. The name and address of any permit applicant or Permittee (40 C.F.R. § 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Permittee shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Permittee shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, § 13267.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. § 122.22(a)(3).).
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
   - **a.** The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
   - **b.** The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated Facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and

c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the Facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

6. Any person providing the electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R. § 122.22(e).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring, sludge use, or disposal practices. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i).)

3. If the Permittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. chapter 1, subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

1. The Permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)

   For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (i.e., combined sewer overflow, sanitary sewer overflow, or bypass event), type of overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volume untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the event, and whether the noncompliance was related to wet weather.

   As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted to the Regional Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. The Regional Water Board may also require the Permittee to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

   b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

The Permittee shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted Facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)

3. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of

permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

The Permittee shall give advance notice to the Regional Water Board of any planned changes in the permitted Facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

H. Other Noncompliance

The Permittee shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Permittee to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7).)

I. Other Information

When the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Permittee shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Contents

Tables

Attachment E – Monitoring and Reporting Program (MRP)

The Code of Federal Regulations section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and California regulations.

The Regional Water Board Executive Officer may modify the monitoring and reporting program for a specific discharger to reduce or increase monitoring frequency and/or eliminate a monitoring parameter if it can be demonstrated that any reduction in monitoring requirements will not compromise water quality.

The MRP is separated into two sections, Surface Water requirements, and Land Disposal Requirements.

I. GENERAL MONITORING PROVISIONS

A. Laboratories analyzing monitoring samples shall be certified by the Department of Health Services, in accordance with the provision of Water Code § 13176, and must include quality assurance/quality control data with their reports.

B. If the Discharger monitors any pollutant more frequently than required by this MRP, using test procedures approved by 40 CFR Part 136 or as specified in this MRP, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the Discharger's self-monitoring report.

C. Samples and measurements taken as required by this MRP shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at 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 the Regional Water Board Executive Officer.

D. Monitoring results, including noncompliance, shall be reported at intervals and in the manner specified in this MRP.

E. 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 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.

F. Composite samples may be taken by a proportional sampling devise approved by the Executive Officer or by grab samples composited in proportion to the flow. In compositing grab samples, the sampling interval shall not exceed one hour.

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Sample Stream or Discharge Point	Monitoring Location Name	Monitoring Location Description
Treatment System Influent	M-INF	Untreated groundwater at a point in the groundwater collection system immediately prior to treatment.
Discharge Point 001	M-001	Treated groundwater before contact with receiving water and/or dilution by any other water or waste. The sampling point is at the end of the treatment system.
Receiving Water	R-001	Receiving water immediately upstream of the point of discharge so that samples are representative of upstream, background conditions within the receiving stream.
Receiving Water	R-002	Receiving water at an appropriate monitoring location, 25 feet downstream of the point of discharge, that adequately represents downstream water quality.

III. INFLUENT MONITORING REQUIREMENTS

A. The Discharger shall monitor untreated groundwater/influent to the treatment Facility at monitoring location M-INF in accordance with the following schedule:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Sampling Frequency	Analytical Method
Hexavalent Chromium	mg/L	Grab	Quarterly	EPA Method 7199

IV. EFFLUENT MONITORING REQUIREMENTS

A. The Discharger shall monitor treated effluent at Monitoring Locations M-001, when discharge to Darby Creek is occurring, in accordance with the following schedule:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Sampling Frequency	Analytical Method[1]
Flow	Gpd	Continuous meter	Daily	Standard Methods
Temperature	° C	Field monitor	1x / month	Standard Methods
pH	standard units	Field monitor	1x / month	Standard Methods
Turbidity	NTU	Field monitor	1x / month	Standard Methods
Dissolved Oxygen	mg/L	Field monitor	1x / month	Standard Methods

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Sampling Frequency	Analytical Method[1]
Hexavalent Chromium	mg/L	Grab	Quarterly	EPA Method 7199
Acute Toxicity[2]	% Survival, Pass or Fail, and % Effect	Grab or 24-composite	1x / year [6]	See Section V below
Chronic Toxicity[3]	Pass or Fail, and % Effect	Grab or 24-hr composite	1x / 5 years[6]	See Section V below
CTR Pollutants[4]	µg/L	Grab or 24-hour composite	1x / 5 years [6]	Standard Methods[7]
Title 22 Pollutants[5]	µg/L	Grab	1x / 5 years[6]	

Table Notes:

1. In accordance with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.
2. Whole effluent acute toxicity testing shall be conducted in accordance with Section V of this MRP.
3. Whole effluent chronic toxicity testing shall be conducted in accordance with Section V of this MRP.
4. CTR Pollutants are those identified as Compound Nos. 1 – 126 by the California Toxics Rule (CTR) at 40 CFR 131.38. Hardness shall be monitored concurrently with the priority pollutant sample. CTR pollutant samples shall be collected using 24-hour composite sampling, except for pollutants that are volatile.
5. Title 22 Pollutants are those pollutants with drinking water primary maximum contaminant levels (MCLs) established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards – Inorganic Chemicals) and Article 5.5 (Primary Standards – Organic Chemicals).
6. Monitoring for this parameter shall occur during the first discharge event to Darby Creek and thereafter in accordance with the schedules established by Section IV of this MRP.
7. Analytical methods must achieve the lowest minimum level (ML) specified in Appendix 4 of the SIP and, in accordance with section 2.4 of the SIP, the Permittee shall report the ML and MDL for each sample result.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Acute Toxicity Testing

The Permittee shall conduct acute whole effluent toxicity testing (WET) in accordance with the following acute toxicity testing requirements.

1. **Test Frequency**. The Permittee shall conduct acute WET testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in Table E-3, above.
2. **Discharge In-stream** Waste Concentration (IWC) for Acute Toxicity. The IWC for this discharge is 100 percent effluent.1
3. **Sample Volume and Holding Time**. The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

[1] The acute toxicity test shall be conducted using 100 percent effluent collected at Monitoring Location EFF-001.

4. **Freshwater Test Species and Test Methods**. The Permittee shall conduct the following acute toxicity tests in accordance with species and test methods in Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (U.S. EPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

   a. A 96-hour static renewal toxicity test with an invertebrate, the water flea, *Ceriodaphnia dubia* (Survival Test Method 2002.0).

   b. A 96-hour static renewal toxicity test with a vertebrate, the rainbow trout, *Oncorhynchus mykiss* (Survival Test Method 2019.0).

5. **Species Sensitivity Screening**. Species sensitivity screening shall be conducted during this permit's first required sample collection. The Permittee shall collect a single effluent sample and concurrently conduct two acute toxicity tests using the invertebrate and fish species identified in section V.A.4, above. This sample shall also be analyzed for the parameters required for the discharge. The species that exhibits the highest "Percent (%) Effect" at the discharge IWC during species sensitivity screening shall be used for routine acute toxicity monitoring during the permit term.

6. **Quality Assurance and Additional Requirements**. Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual referenced in section V.A.4, above. Additional requirements are specified below.

   a. The discharge is subject to determination of "Pass" or "Fail" and "Percent (%) Effect" from acute toxicity tests using the Test of Significant Toxicity (TST) approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤ 0.80 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent (%) Effect" at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response)) × 100.

   b. If the effluent toxicity test does not meet the minimum effluent test acceptability criteria (TAC) specified in the referenced test method, then the Permittee shall re-sample and re-test within 7 days.

   c. Dilution water and control water shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

   d. Test procedures related to pH control, sample filtration, aeration, temperature control and sample dechlorination shall be performed in accordance with the U.S. EPA method and fully explained and justified in each acute toxicity report submitted to the Regional Water Board. The control of pH in acute toxicity tests is allowed, provided the test pH is maintained at the effluent pH measured at the time of sample collection, and the control of pH is done in a manner that has the least influence on the test water chemistry and on the toxicity of other pH sensitive materials such as some heavy metals, sulfide and cyanide.

e. Ammonia Toxicity. The acute toxicity test shall be conducted without modifications to eliminate ammonia toxicity.

7. **Notification**. The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing 14 days after receipt of test results exceeding the acute toxicity effluent limitation during regular or accelerated monitoring. The notification shall describe actions the Permittee has taken or will take to investigate and correct the cause(s) of toxicity. It may also include a status report on any actions required by this Order, with a schedule for actions not yet completed. If no actions have been taken, the reasons shall be given.

8. **Accelerated Monitoring Requirements** . If the result of any acute toxicity test fails to meet the single test minimum limitation (70 percent survival), and the testing meets all TAC, the Permittee shall take two more samples, one within 14 days and one within 21 days following receipt of the initial sample result. If any one of the additional samples do not comply with the three sample median minimum limitation (90 percent survival), the Permittee shall initiate a Toxicity Reduction Evaluation (TRE) in accordance with section V.C of the MRP. If the two additional samples are in compliance with the acute toxicity requirement and testing meets all TAC, then a TRE will not be required. If the discharge stops before additional samples can be collected, the Permittee shall contact the Executive Officer within 21 days with a plan to demonstrate compliance with the effluent limitation.

9. **Reporting**. The Self-Monitoring Report (SMR) shall include a full laboratory report for each toxicity test (WET report). The WET report shall be prepared using the format and content of section 12 (Report Preparation) of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (U.S. EPA Report No. EPA-821-R-02-012, 5th edition or subsequent editions), including:

   a. The toxicity test results in percent (%) survival for the 100 percent effluent sample.

   b. The toxicity test results for the TST approach, reported as "Pass" or "Fail" and "Percent (%) Effect" at the acute toxicity IWC for the discharge.

   c. Water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).

   d. TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.

   e. Statistical program (e.g., TST calculator, CETIS, etc.) output results for each toxicity test.

B. Chronic Toxicity Testing

The Permittee shall conduct chronic toxicity testing in accordance with the following chronic toxicity testing requirements:

1. **Test Frequency**. The Permittee shall conduct chronic toxicity testing in accordance with the schedule established by this MRP while discharging at Discharge Point 001, as summarized in Table E-3, above.

2. **Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity**. The chronic toxicity IWC for this discharge is 100 percent effluent.[2]

[2] The chronic toxicity test shall be conducted using a series of five dilutions and a control. The series shall consist of the following dilutions: 12.5, 25, 50, 75, and 100 percent. Compliance determination will be based on the IWC (100 percent effluent) and a control as further described in Fact Sheet section IV.C.5.c.

3. **Sample Volume and Holding Time**. The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. All toxicity tests shall be conducted as soon as possible following sample collection. For toxicity tests requiring renewals, a minimum of three 24-hour composite samples shall be collected. The lapsed time (holding time) from sample collection to first use of each sample must not exceed 36 hours.

4. **Freshwater Test Species and Test Methods**. The Permittee shall conduct the following chronic toxicity tests in accordance with species and test methods in Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms (U.S. EPA Report No. EPA-821-R-02-013, or subsequent editions). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

   a. A 7-day static renewal toxicity test with a vertebrate, the fathead minnow, Pimephales promelas (Larval Survival and Growth Test Method 1000.0).

   b. A static renewal toxicity test with an invertebrate, the water flea, Ceriodaphnia dubia (Survival and Reproduction Test Method 1002.0).

   c. A 96-hour static non-renewal toxicity test with a plant, the green algae, Selenastrum capricornutum (also named Raphidocelis subcapitata) (Growth Test Method 1003.0).

5. **Species Sensitivity Screening**. Species sensitivity screening shall be conducted during this permit's first required sample collection. The Permittee shall collect a single effluent sample and concurrently conduct three chronic toxicity tests using the fish, the invertebrate, and the algae species identified in section V.B.4, above. This sample shall also be analyzed for the parameters required for the discharge. The species that exhibits the highest "Percent (%) Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit term.

6. **Quality Assurance and Additional Requirements**. Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below.

   a. The discharge is subject to determination of "Pass" or "Fail" and "Percent (%) Effect" for chronic toxicity tests using the TST approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R10-003, 2010), Appendix A, Figure A-1, and Table A-1. The null hypothesis (Ho) for the TST approach is: Mean discharge IWC response ≤ 0.75 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent (%) Effect" at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response)) × 100.

   b. If the effluent toxicity test does not meet the minimum effluent or reference toxicant TAC specified in the referenced test method, then the Permittee shall re-sample and re-test within 14 days.

   c. Dilution water and control water shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

d. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported.

e. The Permittee shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the MRP and the rationale is explained in the Fact Sheet (Attachment F).

f. **Ammonia Removal**. Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Permittee must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following may be steps to demonstrate that the toxicity is caused by ammonia and not other toxicants before the Executive Officer would allow for control of pH in the test.

i. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.

ii. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.

iii. Conduct graduated pH tests as specified in the toxicity identification evaluation methods. For example, mortality should be higher at pH 8 and lower at pH 6.

iv. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity due to ammonia.

When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent.

7. **Notification**. The Permittee shall notify the Regional Water Board verbally within 72 hours and in writing within 14 days after the receipt of a result of "Fail" during routine or accelerated monitoring.

8. **Accelerated Monitoring Requirements**. The trigger for accelerated monitoring for chronic toxicity is exceeded when a chronic toxicity test, analyzed using the TST approach, results in "Fail" and the "Percent Effect" is ≥0.50. Within 24 hours of the time the Permittee becomes aware of a summary result of "Fail", the Permittee shall implement an accelerated monitoring schedule consisting of four toxicity tests—consisting of 5-effluent concentrations (including the discharge IWC) and a control—conducted at approximately 2 week intervals, over an 8 week period. If each of the accelerated toxicity tests results is "Pass," the Permittee shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results is "Fail", the Permittee shall immediately implement the TRE Process conditions set forth in section V.C, below.

9. **Reporting**

a. **Routine Reporting**. The SMR shall include a full laboratory report for the month that chronic toxicity monitoring was performed (WET report). Routine reporting shall include the following in order to demonstrate compliance with permit requirements:

i. WET reports shall include the contracting laboratory's complete report provided to the Permittee and shall be consistent with the appropriate "Report Preparation and Test Review" sections of the methods manual and this MRP. The WET test reports shall contain a narrative report that includes details about WET test procedures and results, including the following:

(a) Receipt and handling of the effluent sample that includes a tabular summary of initial water quality characteristics (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia);

(b) Receipt and handling of the effluent sample that includes a tabular summary of initial water quality characteristics (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia);

(c) Any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;

(d) Any manipulations done to lab control/diluent and effluent such as filtration, nutrient addition, etc.;

(e) Tabular summary of test results for control water and each effluent dilution and statistics summary to include calculation of the NOEC, TUc, and IC25;

(f) The toxicity test results for the TST approach, reported as "Pass" or "Fail" and "Percent (%) Effect" at the chronic toxicity IWC for the discharge;

(g) Identification of any anomalies or nuances in the test procedures or results;

(h) WET test results shall include, at a minimum, for each test:

(1) Sample date(s);

(2) Test initiation date;

(3) Test species;

(4) Determination of "Pass" or "Fail" and "Percent Effect" following the Test of Significant Toxicity hypothesis testing approach in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010). The "Percent Effect" shall be calculated as follows:

(5) "Percent Effect" (or Effect, in %) = ((Control mean response – IWC mean response) ÷ Control mean response)) x 100

(6) End point values for each dilution (e.g., number of young, growth rate, percent survival);

(7) NOEC value(s) in percent effluent;

(8) IC15, IC25, IC40, and IC50 values (or EC15, EC25…etc.) in percent effluent;

(9) TUc values (100/NOEC);

(10) Mean percent mortality (±s.d.) after 96 hours in 100 percent effluent (if applicable);

(11) NOEC and LOEC values for reference toxicant test(s);

(12) IC50 or EC50 value(s) for reference toxicant test(s);

(13) Available water quality measurements for each test (e.g., pH, DO, temperature, conductivity, hardness, salinity, ammonia);

(14) Statistical methods used to calculate endpoints;

(15) The statistical program (e.g., TST calculator, CETIS, etc.) output results, which includes the calculation of percent minimum significant difference (PMSD); and

(16) Results of applicable reference toxicant data with the statistical output page identifying the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD and dates tested; the reference toxicant control charts for each endpoint, to include summaries of reference toxicant tests performed by the contracting laboratory; and any information on deviations from standard test procedures or problems encountered in completing the test and how the problems were resolved.

ii. Compliance Summary. In addition to the WET report, the Permittee shall submit a compliance summary that includes an updated chronology of chronic toxicity test results expressed in "Pass"/"Fail", NOEC and TUc for tests conducted during the permit term, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency (routine, accelerated, or TRE). Each compliance summary report shall clearly identify whether or not the effluent discharge is below the chronic toxicity monitoring triggers and, in the event that the effluent discharge exceeds a single sample or median chronic toxicity trigger, the status of efforts (e.g., accelerated monitoring, TRE, TIE, etc.) to identify the source of chronic toxicity as required by section V.B.8 of this MRP.

b. TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses.

C. Toxicity Reduction Evaluation (TRE) Process

1. **TRE Work Plan**. The Permittee submitted a TRE Work Plan May 1, 2007. The Permittee's TRE Work Plan shall be reviewed and updated as necessary in order to remain current and applicable to the discharge and discharge facilities.

   The Permittee shall notify the Regional Water Board of this review and submit any revisions of the TRE Work Plan within 90 days of the notification, to be ready to respond to toxicity events. The TRE Work Plan shall describe the steps the Permittee intends to follow if toxicity is detected, and should include at least the following items:

   a. A description of the investigation and evaluation techniques that would be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

   b. A description of the Facility's methods of maximizing in-house treatment efficiency, good housekeeping practices, and a list of all chemicals used in the operation of this Facility.

   c. If a toxicity identification evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).

2. **Preparation and Implementation of a Detailed TRE Work Plan**. If one of the accelerated toxicity tests described in section V.A.8, above, does not comply with the three sample median minimum limitation (90 percent survival) or in section V.B.8, above, results in "Fail", the Permittee shall immediately initiate a TRE using, according to the type of treatment facility, EPA manual Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (EPA/600/2-88/070, 1989) and within 30 days submit of receipt of the accelerated monitoring result to the Regional Water Board Executive Officer a Detailed TRE Work Plan, which shall follow the generic TRE Work Plan revised as appropriate for the toxicity event described in section V.A.8 or V.B.8 of this MRP. The Detailed TRE Work Plan shall include the following information, and comply with additional conditions set by the Regional Water Board Executive Officer:

   a. Further actions by the Permittee to investigate, identify, and correct causes of toxicity.

   b. Actions the Permittee will take to mitigate effects of the discharge and prevent the recurrence of toxicity.

   c. A schedule for these actions, progress reports, and the final report.

3. **TIE Implementation**. The Permittee may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test methods and, as guidance, EPA manuals: Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures (EPA/600/6-91/003, 1991); Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/080, 1993); Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/081, 1993); and Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document (EPA/600/R-96- 054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

4. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Permittee shall continue the TRE by determining the sources and evaluating alternative strategies for reducing or eliminating the substances from the discharge. All reasonable steps shall be taken to reduce toxicity to levels consistent with toxicity evaluation parameters.

5. The Permittee shall conduct routine effluent monitoring for the duration of the TRE process. Additional accelerated monitoring and TRE work plans are not required once a TRE has begun.

6. The Regional Water Board recognizes that toxicity may be episodic and identification of the causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

A. Influent Monitoring Requirements

1. The Discharger shall monitor untreated groundwater/influent to the treatment Facility at monitoring location M-INF in accordance with the following schedule.

Table E-4. Influent Monitoring Requirements

Parameter	Units	Sample Type	Sampling Frequency	Analytical Method
Hexavalent Chromium	mg/L	Grab	Quarterly	EPA Method 7199
Hexavalent Chromium	mg/L	Grab	Monthly	(Hach® Kit)

VII. LAND EFFLUENT MONITORING REQUIREMENTS

The Discharger shall monitor treated effluent at Monitoring Locations M-001 in accordance with the following schedule.

Table E-5. Effluent Monitoring – Discharge to Land - Monitoring Location M-001

Parameter	Units	Sample Type	Sampling Frequency	Analytical Method
Flow	gpd	Continuous meter	daily	Standard Methods
Temperature	° C	Field monitor	1x / month	Standard Methods
pH	standard units	Field monitor	1x / month	Standard Methods
Turbidity	NTU	Field monitor	1x / month	Standard Methods
Dissolved Oxygen	mg/L	Field monitor	1x / month	Standard Methods
Hexavalent Chromium	mg/L	Grab	Quarterly	EPA Method 7199
Hexavalent Chromium	mg/L	Grab	Monthly	(Hach® Kit)

VIII. RECLAMATION MONITORING REQUIREMENTS

There are no additional monitoring requirements for the proposed spray irrigation / evaporation of treated groundwater.

IX. RECEIVING WATER MONITORING REQUIREMENTS

The Discharger shall monitor the receiving water, if a discharge to receiving water is implemented, at Monitoring Locations R-001 and at R-002 according to the following schedule:

Table E-6. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Sampling Frequency	Analytical Method[1]
Total Dissolved Solids	mg/L	Grab or Composite	1x / month	Standard Methods
Temperature	° C	Field monitor	1x / month	Standard Methods
pH	standard units	Field monitor	1x / month	Standard Methods
Turbidity	NTU	Field monitor	1x / month	Standard Methods

Table E-6. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Sampling Frequency	Analytical Method[1]
Dissolved Oxygen	mg/L	Field monitor	1x / month	Standard Methods
Specific Conductance	µmhos/cm	Field Monitor	1x / month	Standard Methods
Boron	mg/L	Grab or Composite	Quarterly	Standard Methods
Hexavalent Chromium	mg/L	Grab	Quarterly	EPA Method 7199
CTR Pollutants[2]	µg/L	Grab	1x / 5 years [4]	Standard Methods[5,6]
Title 22 Pollutants[3]	µg/L	Grab	1x / 5 years[4]	

Table Notes:

1. In accordance with the current edition of *Standard Methods for Examination of Water and Wastewater* (American Public Health Administration) or current test procedures specified in 40 C.F.R. part 136.
2. CTR Pollutants are those identified as Compound Nos. 1 – 126 by the California Toxics Rule (CTR) at 40 CFR 131.38. Hardness shall be monitored concurrently with the priority pollutant sample. CTR pollutant samples shall be collected using 24-hour composite sampling, except for pollutants that are volatile.
3. Title 22 Pollutants are those pollutants with drinking water primary maximum contaminant levels (MCLs) established by the State Department of Health Services at Title 22 of the California Code of Regulations, Division 4, Chapter 15, Article 4 (Primary Standards – Inorganic Chemicals) and Article 5.5 (Primary Standards – Organic Chemicals).
4. Monitoring for this parameter shall occur during the first sixty days of operation and thereafter in accordance with the schedules established by Section IV of this MRP.
5. Analytical methods must achieve the lowest minimum level (ML) specified in Appendix 4 of the SIP and, in accordance with section 2.4 of the SIP, the Permittee shall report the ML and MDL for each sample result.
6. In order to verify bis (2-ethylhexyl) is truly present in the effluent discharge, the Permittee shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.

X. OTHER MONITORING REQUIREMENTS

This section is not applicable as there are no additional monitoring requirements to add.

XI. 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.

B. Self Monitoring Reports (SMRs)

1. The Permittee shall submit electronic Self-Monitoring Reports (eSMRs) using the State Water Board's Geotracker Web site (http://geotracker.waterboards.ca.gov/). The Geotracker Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal. The Permittee shall maintain sufficient staffing and resources to ensure it submits eSMRs that are complete and timely. This includes provision of training and supervision of individuals (e.g., Permittee personnel or consultant) on how to prepare and submit eSMRs.
2. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Permittee shall submit SMRs including the results of all required monitoring using U.S. EPA approved test methods or other test methods specified

in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

3. All monitoring results reported shall be supported by the inclusion of the complete analytical report from the laboratory that conducted the analyses.

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

Table E-7. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Annually	January 1 following (or on) permit effective date	January 1 through December 31	March 1, each year (with annual report)

C. Reporting Protocols. The Permittee shall report with each sample result the applicable ML, the RL, and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

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

1. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).

   Sample results less than the reported ML, 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 (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

   Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.

   The Permittee is 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 Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

2. The Permittee shall submit SMRs in accordance with the following requirements:

   a. The Permittee shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations. The reported data shall include calculation of all effluent limitations that require averaging, taking of a median, or other computation.

The Permittee is not required to duplicate the submittal of data that is entered in a tabular format within Geotracker. When electronic submittal of data is required and Geotracker does not provide for entry into a tabular format within the system, the Permittee shall electronically submit the data in a tabular format as an attachment.

b. The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify:

Facility name and address;

WDID number;

Applicable period of monitoring and reporting;

Violations of the WDRs (identified violations must include a description of the requirement that was violated and a description of the violation);

Corrective actions taken or planned; and

The proposed time schedule for corrective actions.

SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the Geotracker Web site http://geotracker.waterboards.ca.gov/. In the event that an alternate method for submittal of SMRs is required, the Permittee shall submit the SMR electronically via e-mail to NorthCoast@waterboards.ca.gov or on disk (CD or DVD) in Portable Document Format (PDF) file in lieu of paper-sourced documents. The guidelines for electronic submittal of documents can be found on the Regional Water Board website at http://waterboards.ca.gov/northcoast.

3. Monitoring data and reports shall also be submitted electronically to the State Water Resources Control Board's Geographical Environmental Information Management System online database Geotracker, http://geotracker.waterboards.ca.gov/ as required by Title 23, Division 3, Chapter 30, Article 2, Sections 3890-3895 of the California Code of Regulation).

D. Discharge Monitoring Reports (DMRs)

1. DMRs are U.S. EPA reporting requirements. If a discharge to surface water under this permit occurred during the reporting timeframe, the Permittee shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic submittal of DMRs will be in addition to electronic submittal of SMRs. DMRs shall be submitted quarterly on the first day of the second calendar month following the end of each quarter (February 1, May 1, August 1, November 1). Information about electronic submittal of DMRs is available at the Discharge Monitoring Report web site at http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/.

2. Annual Report. The Permittee shall submit an annual report to the Regional Water Board for each calendar year through the GeotrackerWeb site. In the event that a paper copy of the annual report is required, the Permittee shall submit the report to the email address in section X.B.6.c., above. The report shall be submitted by March 1st of the following year. The report shall, at a minimum, include the following:

a. Both tabular and/or graphical summaries of the monitoring data and disposal records from the previous year. If the Permittee monitors any pollutant more frequently than

required by this Order, using test procedures approved under 40 C.F.R. part 136 or as specified in this Order, the results of this monitoring shall be included in the calculation and report of the data submitted SMR.

b. A comprehensive discussion of the Facility's compliance (or lack thereof) with all effluent limitations and other WDRs, and the corrective actions taken or planned, which may be needed to bring the discharge into full compliance with the Order.

c. The names and general responsibilities of all persons employed at the Facility;

d. The names and telephone numbers of persons to contact regarding the Facility for emergency and routine situations; and

e. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

E. Spill Notification

1. Spills and Unauthorized Discharges. Information regarding all spills and unauthorized discharges (except SSOs) that may endanger health or the environment shall be provided orally to the Regional Water Board[3] within 24 hours from the time the Permittee becomes aware of the circumstances and a written report shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances, in accordance with Section V.E of Attachment D.

Information to be provided verbally to the Regional Water Board includes:

Name and contact information of caller;

Date, time, and location of spill occurrence;

Estimates of spill volume, rate of flow, and spill duration, if available and reasonably accurate;

Surface water bodies impacted, if any;

Cause of spill, if known at the time of the notification;

Cleanup actions taken or repairs made at the time of the notification; and

Responding agencies.

[3] The contact number of the Regional Water Board during normal business hours is (707) 576-2220. After normal business hours, spill reporting to the California Governor's Office of Emergency Services Warning Center (CalOES) will satisfy the 24 hour spill reporting requirement for the Regional Water Board. The contact number for spill reporting for the CalOES is (800) 852-7550.

Table E-8. MLs for CTR Pollutants (µg/L)

CTR Pollutant	CAS No.	ML
Antimony	7440360	0.5
Arsenic	7440382	1.0
Beryllium	7440417	0.5
Cadmium	7440439	0.25
Chromium $^{+3}$	7440473	-
Chromium $^{+6}$	18540299	1.0
Copper	7440508	0.5
Lead	7439921	0.5
Mercury	7439976	0.2
Nickel	7440020	1.0
Selenium	7782492	1.0
Silver	7440224	0.25
Thallium	7440280	1.0
Zinc	7440666	1.0
Cyanide	57125	5.0
Asbestos	1332214	-
2,3,7,8 TCDD	1746016	
Acrolein	107028	2.0
Acrylonitrile	107131	2.0
Benzene	71432	0.5
Bromoform	75252	0.5
Carbon Tetrachloride	56235	0.5
Chlorobenzene	108907	0.5
Chlorodibromomethane	124481	0.5
Chloroethane	75003	0.5
2-Chlorethylvinyl Ether	110758	1.0
Chloroform	67663	0.5
Dichlorobromomethane	75274	0.5

Table E-8. MLs for CTR Pollutants (µg/L)

CTR Pollutant	CAS No.	ML
1,1 Dichloroethane	75343	0.5
1,2 Dichloroethane	107062	0.5
1,1 Dichloroethene	75354	0.5
1,2 Dichloropropane	78875	0.5
1,3 Dichloropropylene	542756	0.5
Ethylbenzene	100414	0.5
Methyl Bromide	74839	1.0
Methyl Chloride	74873	0.5
Methylene Chloride	75092	0.5
1,1,2,2 Tetrachloroethane	79345	0.5
Tetrachloroethylene	127184	0.5
Toluene	108883	0.5
Trans-1,2 Dichloroethylene	156605	0.5
1,1,1 Trichloroethane	71556	0.5
1,1,2 Trichloroethane	79005	0.5
Trichloroethylene	79016	0.5
Vinyl Chloride	75014	0.5
2 Chlorophenol	95578	2.0
2,4 Dichlorophenol	120832	1.0
2,4 Dimethylphenol	105679	1.0
4,6 Dinitro-2-methylphenol	534521	5.0
2,4 Dinitrophenol	51285	5.0
2 Nitrophenol	88755	10
4-Nitrophenol	100027	5.0
4-Chloro-3-Methylphenol	59507	1.0
Pentachlorophenol	87865	1.0
Phenol	108952	1.0
2,4,6 Trichlorophenol	88062	10

Table E-8. MLs for CTR Pollutants (µg/L)

CTR Pollutant	CAS No.	ML
Acenapthene	83329	0.5
Acenapthylene	208968	0.2
Anthracene	120127	2.0
Benzidine	92875	5.0
Benzo(a)Anthracene	56553	5.0
Benzo(a)Pyrene	50328	2.0
Benzo(b)Fluoranthene	205992	10
Benzo(g,h,i)Perylene	191242	0.1
Benzo(k)Fluoranthene	207089	2.0
Bis(2-Chloroethoxy)Methane	111911	5.0
Bis(2-Chloroethyl)Ether	111444	1.0
Bis (2-Chloroisopropyl) Ether	39638329	2.0
Bis (2-ethylhexyl) Phthalate	117817	5.0
4-Bromophenyl Phenyl Ether	101553	5.0
Butyl Benzyl Phthalate	85687	10
4-Chlorophenyl Phenyl Ether	7005723	10
Chrysene	218019	5.0
Dibenzo(a,h)Anthracene	53703	5.0
1,2 Dichlorbenzene	95501	0.1
1,3 Dichlorobenzene	541731	2.0
1,4 Dichlorobenzene	106467	1.0
3,3 Dichlorobenzidine	91941	1.0
Diethyl Phthalate	84662	5.0
Dimethyl Phthalate	131113	2.0
Di-n-Butyl Phthalate	84742	2.0
2,4 Dinitrotoluene	121142	10
2,6 Dinitrotoluene	606202	5.0
Di-n-Octyl Phthalate	117840	5.0

Table E-8. MLs for CTR Pollutants (µg/L)

CTR Pollutant	CAS No.	ML
1,2 Diphenylhydrazine	122667	10
Fluoranthene	206440	1.0
Fluorene	86737	0.05
Hexachlorobenzene	118741	0.1
Hexachlorobutadiene	87683	1.0
Hexachlorocyclopentadiene	77474	1.0
Hexachloroethane	67721	5.0
Indeno (1,2,3-cd) Pyrene	193395	1.0
Isophorone	78591	0.05
Napthalene	91203	1.0
Nitrobenzene	98953	0.2
N-Nitrosodimethylamine	62759	1.0
N-Nitrosodi-n-propylamine	621647	5.0
N-Nitrosodiphenylamine	86306	5.0
Phenanthrene	85018	1.0
Pyrene	129000	0.05
1,2,4 Trichlorobenzene	120821	0.05
Aldrin	309002	1.0
alpha-BHC	319846	0.005
beta-BHC	319857	0.01
Lindane (gamma-BHC)	58899	0.005
delta-BHC	319868	0.02
Chlordane	57749	0.005
4,4-DDD	72548	0.1
4,4-DDE	72559	0.05
4,4-DDT	50293	0.05
Dieldrin	60571	0.01
alpha-Endosulfan	959988	0.01

Table E-8. MLs for CTR Pollutants (µg/L)

CTR Pollutant	CAS No.	ML
beta-Endosulfan	33213659	0.02
Endosulfan Sulfate	1031078	0.01
Endrin	72208	0.05
Endrin Aldehyde	7421934	0.01
Heptachlor	76448	0.01

Table E-9. DLRs for the Title 22 Pollutants (µg/L)

Title 22 Pollutant	CAS No.	DLR (µg/L)
Aluminum	7429905	50
Antimony	7440360	6.0
Arsenic	7440382	2.0
Asbestos	1332214	0.2 MFL > 10 µm
Barium	7440393	100
Beryllium	7440417	1.0
Cadmium	7440439	1.0
Chromium		10
Cyanide	57125	100
Fluoride	7782414	100
Mercury	7439976	1.0
Nickel	7440020	10
Nitrate (as N)	-	2,000
Nitrate + Nitrite (sum as N)	-	-
Nitrite (as N)	-	400
Selenium	7782492	5.0
Thallium	7440280	1.0

Table E-8. MLs for CTR Pollutants (µg/L)

CTR Pollutant	CAS No.	ML
Heptachlor Epoxide	1024573	0.01
PCBs	1336363	0.01
Toxaphene	8001352	0.5

Table E-9. DLRs for the Title 22 Pollutants (µg/L)

Title 22 Pollutant	CAS No.	DLR (µg/L)
Benzene	71432	0.5
Carbon Tetrachloride	56235	0.5
1,2 Dichlorbenzene	95501	0.5
1,4 Dichlorobenzene	106467	0.5
1,1 Dichloroethane	75343	0.5
1,2 Dichloroethane	107062	0.5
1,1 Dichloroethene	75354	0.5
Cis-1,2 Dichloroethylene	156592	0.5
Trans-1,2 Dichloroethylene	156605	0.5
Methylene Chloride	75092	0.5
1,2 Dichloropropane	78875	0.5
1,3 Dichloropropylene	542756	0.5
Ethylbenzene	100414	0.5
Methyl-tert-butyl-ether	1634044	3.0
Monochlorobenzene	108907	0.5
Styrene	100425	0.5
1,1,2,2 Tetrachloroethane	79345	0.5
Tetrachloroethylene	127184	0.5
Toluene	108883	0.5
1,2,4 Trichlorobenzene	120821	0.5
1,1,1 Trichloroethane	71556	0.5

Table E-9. DLRs for the Title 22 Pollutants (µg/L)

Title 22 Pollutant	CAS No.	DLR (µg/L)
1,1,2 Trichloroethane	79005	0.5
Trichloroethylene	79016	0.5
Trichlorofluoromethane	75694	5.0
1,1,2 Trichloro-1,2,2 Trifluoroethane	76131	10
Vinyl Chloride	75014	0.5
Xylenes	1330207	0.5
Alachlor	15972608	1.0
Atrazine	1912249	0.5
Bentazon	25057890	2.0
Benzo(a)pyrene	50328	0.1
Carbofuran	1563662	5.0
Chlordane	57749	0.1
2,4 D	94757	10
Dalapon	75990	10
Dibromochloropropane	96128	0.01
Di(2-ethylhexyl)adipate	103231	5.0
Di(2-ethylhexyl)phthalate	117817	3.0
Dinoseb	88857	2.0
Diquat	85007	4.0
Endothall	145733	45
Endrin	72208	0.1
Ethylene Dibromide	8003074	0.02
Glyphosate	1071836	25
Heptachlor	76448	0.01
Heptachlor Epoxide	1024573	0.01
Hexachlorobenzene	118741	0.5
Hexachlorocyclopentadiene	77474	1.0
Lindane	58899	0.2

Table E-9. DLRs for the Title 22 Pollutants (µg/L)

Title 22 Pollutant	CAS No.	DLR (µg/L)
Methoxychlor	72435	10
Molinate	2212671	2.0
Oxamyl	23135220	20
Pentachlorophenol	87865	0.2
Picloram	1918021	1.0
PCBs	1336363	0.5
Simazine	122349	1.0
Thiobencarb	28249776	1.0
Toxaphene	8001352	1.0
2,3,7,8 TCDD (Dioxin)	1746016	5×10^{-6}
2,4,5 TP (Silvex)	93721	1.0

ATTACHMENT F – FACT SHEET

Contents

Tables

ATTACHMENT F – FACT SHEET

As described in Section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	1B6008NMEN
Discharger	Willits Environmental Remediation Trust City of Willits
Name of Facility	Page Property, Willits
Facility Address	3920 Canyon Road Willits, CA 95490 Mendocino County
Facility Contact, Title and Phone	Anne Farr, Trustee, Willits Environmental Remediation Trust (916) 805-5856 Paul Cayler, City of Willits, (707) 459-4605
Authorized Person to Sign and Submit Reports	Anne Farr
Mailing Address	Willits Environmental Remediation Trust, 692 Russell Drive, Folsom, CA 95630 City of Willits, 111 East Commercial Street, Willits, CA 95490
Billing Address	SAME
Type of Facility	Former Burn Dump/Chromic Acid Disposal Pits
Major or Minor Facility	Minor
Threat to Water Quality	A
Complexity	3
Pretreatment Program	No
Reclamation Requirements	User
Facility Permitted Flow	29,000 gpd
Facility Design Flow	29,000 gpd
Watershed	Outlet Creek
Receiving Water	Darby Creek
Receiving Water Type	Surface Water

A. The City of Willits is the owner of the property where a former municipal burn dump operated from the 1940s to the early 1970s. Chromic acid wastes from the Remco Facility were disposed at the location of the burn dump. Initially, chromic acid was discharged to the operating burn dump, and subsequently in ponds dug at the site.

The Willits Environmental Remediation Trust (WERT) is an independent instrumentality of the United States District Court for the Northern District of California, as established pursuant to the Amended Final Consent Decree, Final Order, and Final Judgment; And Order Establishing the Willits Environmental Remediation Trust, entered by Judge Susan Illston (N.D. Ca, Case No. C96-0283SI) on December 22, 2000 (the Consent Decree). The WERT was established in part to completely, timely and cost-effectively conduct all investigatory and remedial work at the Remco Facility located at 934 South Main Street in Willits, California (Remco Facility), and surrounding areas in and around the City of Willits where hazardous substances associated with the Remco Facility operations have come to be located. The Page Property is one location where Remco wastes are located,

and the WERT is investigating and cleaning up those wastes. The City of Willits and the WERT are referred to as the Dischargers.

B. The Facility is permitted to discharge highly treated groundwater to a spray irrigation field and Darby Creek, waters of the United States, and is currently regulated by Order No. R1-2012-0026, which was adopted on April 26, 2012.

C. The Willits Environmental Remediation Trust (hereinafter referred to as Discharger) filed a Report of Waste Discharge and submitted an application for renewal of WDRs and National Pollutant Discharge Elimination System (NPDES) permit on July 29, 2016.

II. FACILITY DESCRIPTION

A. Description of Collection System, Wastewater and Biosolids Treatment or Controls

The treatment system consists of an extraction trench, piping to the treatment system at the top of the hill, carbon vessels to remove contaminants, and a holding tank prior to the discharge to a spray irrigation field.

B. Discharge Points and Receiving Waters

The primary disposal of highly treated groundwater is to a spray irrigation field. A discharge to Darby Creek is a backup to the spray field. If needed, the one discharge point to Darby Creek is located on the west end of the former burn dump site.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

There is an existing Monitoring and Reporting Program Order on the Page Property site that specifies the current groundwater monitoring and surface water monitoring program. In addition, Monitoring and Reporting Program No. R1-2017-XXXX is included as Attachment E and specifies the required monitoring for the groundwater extraction and treatment system. The monitoring program is separated to require monitoring for land disposal, and require monitoring for a discharge to Darby Creek. The Darby Creek monitoring is required only if highly treated groundwater is discharged to Darby Creek.

D. Compliance Summary

The discharge of groundwater contaminated with hexavalent chromium to Darby Creek is a violation of the discharge prohibitions contained in the Basin Plan. The groundwater extraction and treatment system mitigates the discharge. Monitoring of influent water and highly treated effluent water is required to confirm compliance with waste discharge requirements. Reports were submitted on a semi-annual basis as required by Order No. R1-2012-0026. Attachment G provides historical water sampling test results.

E. Planned Changes

There are no planned changes to the existing extraction, treatment, and disposal of highly treated groundwater. Based on lengthy and consistent historical analytical results, the report submittal frequency changes to an annual basis. Analytical testing for VOCs is no longer required.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Permit is issued pursuant to CWA Section 402 and implementing regulations adopted by the U.S. EPA and the CWC, Division 7, Chapter 5.5. It shall serve as a NPDES permit for point source discharges of highly treated groundwater to surface waters. This

Permit shall also serve as Waste Discharge Requirements (WDRs) pursuant to the CWC, Division 7, Article 4, Chapter 4 for discharges that are not subject to regulation under CWA Section 402.

B. California Environmental Quality Act (CEQA)

This Order serves as both an NPDES permit for discharges to waters of the U.S. and as WDRs for discharges to waters of the state (the land discharges). The Regional Water Board's responsibilities under CEQA differ for NPDES-related discharges and WDR-related discharges.

Pursuant to Water Code section 13389, an action to adopt an NPDES permit is exempt from the provisions of CEQA contained in Public Resources Code sections 21100-21177. Accordingly, this exemption from CEQA applies to the Regional Water Board's actions to adopt those portions of the Order that regulate NPDES-discharges.

Similarly, the Regional Water Board's action in approving those parts of the Order that regulate WDR-related discharges is exempt from CEQA as an existing facility with no expansion of use beyond that existing at the time of the lead agency's determination pursuant to Title 14, CCR, Section 15301.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a Water Quality Control Plan for the North Coast Region (the 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. Beneficial uses are designated for all waters of the North Coast Region and are designated for coastal and inland waters, wetlands, and groundwaters. Beneficial uses of any water body specifically identified in the Basin Plan generally apply to its tributary streams.

2. The Basin Plan identifies the following existing and potential beneficial uses for Outlet Creek, a tributary of the Eel River.

Discharge Point	Receiving Water	Beneficial Uses
001	**Eel River**	<u>Existing:</u> MUN – Municipal and Domestic Supply AGR – Agricultural Supply IND – Industrial Service Supply GWR – Groundwater Recharge FRSH – Freshwater Replenishment NAV – Navigation REC1 – Water Contact Recreation REC2 – Non-Contact Water Recreation COMM – Commercial and Sport Fishing COLD – Cold Freshwater Habitat WILD – Wildlife Habitat RARE – Preservation of Rare, Threatened, or Endangered Species MIGR – Migration of Aquatic Organisms SPWN – Spawning, Reproduction, and/or Early Development <u>Potential:</u>

Discharge Point	Receiving Water	Beneficial Uses
		PRO – Industrial Process Supply POW – Hydropower Generation AQUA – Aquaculture
	Groundwater	Existing: MUN – Municipal and Domestic Supply AGR – Agricultural Supply IND – Industrial Service Supply FRSH – Freshwater replenishment to Surface Waters CUL – Native American Culture Potential: PRO – Industrial Process Supply AQUA – Aquaculture

The State Water Resources Control Board (State Board) adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives for inland surface waters.

Requirements of this Order protect all receiving water beneficial uses and specifically implement the applicable water quality control plans, described above.

3. **Thermal Plan**. The State Water Board adopted a Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California (Thermal Plan) on May 18, 1972, and amended this plan on September 18, 1975. This plan contains temperature objectives coastal and interstate waters and enclosed bays and estuaries of the State. Requirements of this Order implement the Thermal Plan to the extent that it is applicable to receiving waters for this Discharger.

4. **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.

5. **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.

6. **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 (section 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.

   Antidegradation Policy. Section 131.12 of 40 CFR requires that 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 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that the existing water quality be maintained unless any change is consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use, and will not result in water quality less than that prescribed in adopted policies. In addition, discharger must utilize the best practicable treatment or control to prevent a nuisance and assure the highest water quality consistent with the maximum benefit to the people of the State will be maintained. Groundwater extraction and treatment is an available strategy for cleaning up contaminated groundwater that has the advantage of controlling contaminant migration while completing the cleanup. The Regional Water Board finds that compliance with this Permit results in the maximum benefit to the people of the State and is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16.

7. **Anti-Backsliding Requirements**. CWA Sections 402 (o) (2) and 303 (d) (4) and NPDES regulations at 40 CFR 122.44 (l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. If the quality of waters equals or exceeds levels necessary to protect designated beneficial uses and water quality standards, an effluent limitation may be revised if consistent with the antidegradation policy (33 USC § 1313(d)(4)(B)). Discharges of any constituent for which the receiving water is listed as impaired is prohibited in this Permit. Order No. R1-2012-0026 satisfies all anti-backsliding requirements of the Clean Water Act and implementing regulations.

D. Impaired Water Bodies on CWA 303(d) List

On June 5 and July 25, 2003, the USEPA approved the list of impaired water bodies, prepared by the State Water Board pursuant to Section 303 (d) of the CWA – water bodies which are not expected to meet applicable water quality standards after implementation of technology-based effluent limitations for point sources.

The Eel River is listed as an impaired water body for sediment and temperature pursuant to Section 303(d) of the CWA. The South Fork Eel River Total Maximum Daily Load was promulgated by U.S. EPA on December 16, 1999. An analysis of the discharge determined that it does not contain temperature or sediment at levels which will cause, have the reasonable potential to cause, or contribute to increases in temperature or sediment levels in the Eel River. This finding is based in part that the treatment system will remove any sediment or suspended materials, and the summer seasonal discharge prohibition.

E. Other Plans, Polices and Regulations

The "Water Quality Control Plan for the North Coast Region" (Basin Plan) includes water quality objectives, implementation plans for point source and nonpoint source discharges, prohibitions, and statewide plans and policies. The Basin Plan contains a narrative objective (standard) for toxicity that requires:

All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassay of appropriate duration or other appropriate methods as specified by the Regional Water Board.

The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary for other control water that is consistent with the requirements for "experimental water" as described in Standard Methods for the Examination of Water and Wastewater 18th Edition (1992), or current edition. At a minimum, compliance with this objective as stated in the previous sentence shall be evaluated with a 96-hour bioassay.

In addition, effluent limits based upon acute bioassays of effluent will be prescribed. Where appropriate, additional numerical receiving water objectives for specific toxicants will be established as sufficient data become available, and source control of toxic substances will be encouraged.

The Discharger has determined that this Facility does not have storm water discharges to surface waters because the Facility consists of a building to house the treatment unit. This Facility is not required to file a storm water permit.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations; and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR §122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 CFR §122.44(d) requires that permits include WQBELs to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

A. Discharge Prohibitions

1. **Discharge Prohibition III.A.** The discharge of waste, including highly treated groundwater and purge waters extracted from the site and treated, is prohibited unless the discharge is regulated by an NPDES permit or is discharged to a permitted facility.

   The prohibition is consistent with the previous NPDES permit regulating groundwater treatment systems. Technology exists to remove contaminants to below the detection limit. Prohibiting detectable levels of contaminants to surface waters ensures protection of the beneficial uses of waters of the State.

2. **Discharge Prohibition III.B.** The discharge of groundwater to Darby Creek containing inorganic constituents in excess of background levels in the receiving water is prohibited.

This prohibition is consistent with previous NPDES Permit regulating groundwater treatment systems. The purpose of this prohibition is to prevent water quality impairment and degradation of surface waters from a groundwater discharge. For example, naturally occurring metals in groundwater such as iron and manganese can cause impairment to fisheries. Prohibiting the discharge above background concentrations in the receiving water will ensure protection of all beneficial uses of waters of the State.

3. **Discharge Prohibition III.C.** The discharge from the treatment Facility of detectable levels of organic constituents listed in the Table 1, 2, and 3 attached to this Order is prohibited.

   This prohibition is designed to provide minimum levels of detection for the constituents listed in Tables 1, 2, and 3 included in Attachment E. In many instances, minimum levels of detection can vary from laboratories. The tables provide the required minimum detection levels for the analytes listed in each table.

4. **Discharge Prohibition III.D and E.** The discharge of treated groundwater to land containing inorganic constituents in excess of the background levels in groundwater is prohibited. The discharge to land of highly treated water containing hexavalent chromium is prohibited.

   The purpose of these prohibitions is to prevent groundwater quality degradation from a discharge to the spray irrigation area which is located outside the area of contamination.

5. **Discharge Prohibition III.F**. Creation of a pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code (CWC) is prohibited.

   This prohibition is based on CWC Section 13050.

6. **Discharge Prohibition III.G.** The discharge of extracted and treated groundwater/purge waters in excess of 29,000 gpd is prohibited.

   The prohibition is based on the groundwater treatment system designed to treat 29,000 gpd. Any increased flow to the treatment system may result in inadequate treatment. Therefore, the prohibition is in place to prohibit flows in excess of the design capacity.

7. **Discharge Prohibition III.H.** Bypass or overflow of untreated groundwater to waters of the State from the treatment system or from the collection and transport systems or from pump stations tributary to the treatment system is prohibited.

   This prohibition is based on the Basin Plan to protect beneficial uses of the receiving water from unpermitted discharges, and the intent of CWC sections 13260 through 13264 relating to the discharge of waste to waters of the State without filing for and being issued a permit. This prohibition applies to, but is not limited to, sanitary sewer overflows, spills, and other unauthorized discharges of wastewater within the collection, treatment, reclamation, and disposal facilities.

8. **Discharge Prohibition III.I.** The discharge of waste to land that is not owned by or under agreement to use by the permittee is prohibited.

   This is a standard prohibition contained in previous NPDES Permits for groundwater treatment systems. The prohibition is included in this Permit to ensure the discharge of highly treated water is not discharged to land without the authorization of the property owner and in accordance with this Permit.

9. **Discharge Prohibition III.J.** The discharge of treated groundwater and purge waters from the treatment system to the Eel River or its tributaries is prohibited during the period May 15 through September 30 of each year.

   The Basin Plan prohibits discharges to the Eel River and its tributaries during the period May 15 through September 30 (Chapter 4, North Coastal Basin Discharge Prohibition No. 4). The original intent of this prohibition was to prevent the contribution of wastewater to the baseline flow of the Eel River during the period of the year when the Eel River and its tributaries experience the heaviest water-contact recreation use.

F. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations , 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. There are no applicable Effluent Limitations Guidelines (technology-based limitations established by the US EPA) for groundwater pump-and-treat systems. Technology-based requirements of the General Permit have been established using Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3.

The CWA requires that technology-based effluent limitations be established according to several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCP standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of the NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires the US EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS for specific industrial categories. Where the US EPA has not yet developed ELGs for a particular industry or a particular pollutant, Section 402(a)(1) of the CWA and US EPA regulations at 40 CFR 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis. When BPJ is used, the permit writer must consider specific factors outlined at 40 CFR 125.3.

2. Applicable Technology-Based Effluent Limitations

The pollutants of concern and the MLs established for these pollutants are listed in Tables E-8 and E-9 of Attachment E. Organic pollutants must be treated to the MLs established in the tables. The Regional Water Board has therefore established an effluent limitation for organic pollutants requiring their removal to nondetectable concentrations using BPJ based on the observation that treatment technology, properly operated, is available to effectively reduce pollutants of concern to the nondetectable concentrations, which are defined by the Order.

G. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

Section 301(b) of the CWA and section 122.44(d) of 40 C.F.R 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) of 40 C.F.R. 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) USEPA 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 section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. Beneficial Uses. Applicable beneficial uses are discussed in III.C of this Fact Sheet.

b. Basin Plan Water Quality Objectives. In addition to the specific water quality objectives indicated above, the Basin Plan contains narrative water quality objectives for color, tastes and odors, floating material, suspended material, settleable material, oil and grease, biostimulatory substances, sediment, turbidity, pH, dissolved oxygen, bacteria, temperature, toxicity, pesticides, chemical constituents, and radioactivity that apply to inland surface waters, enclosed bays, and estuaries, including Darby Creek. These narrative water quality objectives are reflected in Section V., Receiving Water Limitations, of the Order. For waters designated for use as MUN, the Basin Plan establishes as applicable water quality criteria the MCLs established by the DDW for the protection of public water supplies at title 22 of the CCR section 64431 (Inorganic Chemicals) and section 64444 (Organic Chemicals).

c. State Implementation Policy (SIP), CTR, and NTR. Water quality criteria and objectives applicable to North Coast Region receiving waters are established by

the California Toxics Rule (CTR), established by the USEPA at 40 CFR 131.38; and the National Toxics Rule (NTR), established by the USEPA at 40 CFR 131.36. Criteria for most of the 126 priority pollutants are contained within the CTR and the NTR.

3. Determining the Need for WQBELs

CWA section 301 (b)(1) requires NPDES permit to include effluent limitations that achieve technology-based standards and any more stringent limitations necessary to meet water quality standards. Water quality standards include Regional Water Board Basin Plan beneficial uses and narrative and numeric water quality objectives, State Water Board adopted standards, and federal standards, including CTR and NTR. Basin Plans include numeric site specific water quality objectives and narrative objectives for toxicity, chemical constituents, and tastes and odors.

Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard.

The chemical constituents of concern regulated by this General Permit include pollutants associated with cleanup activities including petroleum related organic compounds and other volatile organic compounds and naturally occurring inorganic compounds. As described in section V.B. above, technology-based effluent limitations have been established for all volatile organic compounds regulated under this General Permit.

Inorganic pollutants, however, are naturally occurring and not treated as part of the groundwater pump and treat system. Therefore, inorganic pollutants in the effluent have the potential to cause or contribute to exceedances of applicable water quality criteria for receiving waters. Therefore effluent limitations are established as WQBELs in this General Permit.

4. WQBEL

Order No. R1-2017-0046 establishes a whole effluent, acute toxicity effluent limitation as well as monitoring requirements for acute and chronic toxicity. These requirements pertaining to whole effluent toxicity are based on the CWA and the Basin Plan. The Basin Plan includes a water quality objective for the North Coast Region that requires all waters to be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. To assure compliance with the Basin Plan's narrative toxicity objective, this Order establishes an acute toxicity effluent limitation and requires the Discharger to conduct whole effluent toxicity testing for acute and chronic toxicity, as specified in the Monitoring and Reporting Program (Attachment E, Section V.).

Whole Effluent Toxicity (WET)

Monitoring and effluent limitations for whole effluent toxicity protect the receiving water from the aggregate effect of a mixture of pollutants that may be present in effluent. There are two types of WET tests – acute and chronic. An acute toxicity test is conducted over a short time period and measures mortality. A chronic test is conducted over a longer period of time and may measure mortality, reproduction, and/or growth.

WET requirements are derived from the CWA and the Basin Plan. The Basin Plan establishes a narrative water quality objective for toxicity that states "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, or aquatic life." Detrimental responses may include, but are not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota. For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Permittee to conduct WET testing for acute and chronic toxicity, as specified in the MRP (Attachment E, section V).

Acute Aquatic Toxicity

Consistent with Order No. R1-2012-0026, this Order includes an effluent limitation for acute toxicity in accordance with the Basin Plan, which requires that the average survival of test organisms in undiluted effluent for any three consecutive 96-hour bioassay tests be at least 90 percent, with no single test having less than 70 percent survival.

The Order implements federal guidelines (Regions 9 and 10 Guidelines for Implementing Whole Effluent Toxicity Testing Programs) by requiring the Permittee to conduct acute toxicity tests on a fish species and on an invertebrate species to determine the most sensitive species. According to the U.S. EPA manual, Methods for Estimating the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (EPA/600/4-90/-27F), the acceptable vertebrate species for the acute toxicity test are the fathead minnow, *Pimephales promelas* and the rainbow trout, *Oncorhynchus mykiss*. The acceptable invertebrate species for the acute toxicity test are the water flea, *Ceriodaphnia dubia*, *Daphnia magna*, and *D. pulex*. This Order requires the Permittee to conduct a screening test using a vertebrate and invertebrate species. After the screening test is completed, monitoring can be reduced to the most sensitive species. If a discharge to receiving waters is implemented, Attachment E of this Order requires annual acute WET monitoring.

Chronic Aquatic Toxicity

The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. The SIP requires that the Permittee demonstrate the presence or absence of chronic toxicity using tests on the fathead minnow, *Pimephales promelas*, the water flea, *Ceriodaphnia dubia*, and the freshwater alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*). If a discharge to receiving waters is implemented, Attachment E of this Order requires chronic WET monitoring every five years to demonstrate compliance with the narrative toxicity objective.

Since a discharge to receiving waters has not been implemented, the reasonable potential to exceed the Basin Plan's narrative toxicity objective for chronic toxicity cannot be determined and effluent limitations have not been established in this Order.

Numeric chronic toxicity effluent limitations have not been included in the Order for consistency with the SIP, which implements narrative toxicity objectives in basin plans and specifies use of a numeric trigger for accelerated monitoring and implementation of a Toxicity Reduction Evaluation (TRE) in the event that persistent toxicity is detected. The SIP contains implementation gaps regarding the appropriate form and implementation of chronic toxicity limits. This has resulted in

the petitioning of a NPDES permit in the Los Angeles Region that contained numeric chronic toxicity effluent limitations. To address the petition, the State Water Board adopted WQO 2003-0012 directing its staff to revise the toxicity control provisions in the SIP. The State Water Board states the following in WQO 2003-012, "*In reviewing this petition and receiving comments from numerous interested persons on the propriety of including numeric effluent limitations for chronic toxicity in NPDES permits for publicly-owned treatment works, that discharge to inland waters, we have determined that this issue should be considered in a regulatory setting, in order to allow for full public discussion and deliberation. We intend to modify the SIP to specifically address the issue. We anticipate that review will occur within the next year. We therefore decline to make a determination here regarding the propriety of the final numeric effluent limitations for chronic toxicity contained in these permits*." The process to revise the SIP is underway. Proposed changes include clarifying the appropriate form of effluent toxicity limits in NPDES permits and general expansion and standardization of toxicity control implementation related to the NPDES permitting process. Since the toxicity control provisions in the SIP are under revision, it is infeasible to develop numeric effluent limitations for chronic toxicity at this time. The SIP revision may require a permit modification to incorporate new statewide toxicity criteria established by the upcoming SIP revision.

This Order includes a reopener that allows the Regional Water Board to reopen the permit and include a numeric chronic toxicity limitation, a revised acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE.

To ensure compliance with the narrative effluent limitation and the Basin Plan's narrative toxicity objective, the Permittee is required to conduct annual chronic WET testing at Discharge Point 001, as specified in the MRP (Attachment E, section V). Furthermore, the MRP (Attachment E, section V.C) requires the Permittee to investigate the causes of, and identify and implement corrective actions to reduce or eliminate effluent toxicity. If the discharge demonstrates toxicity exceeding the numeric toxicity monitoring trigger, the Permittee is required to initiate a TRE in accordance with an approved TRE work plan. The numeric toxicity monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Permittee is required to perform accelerated chronic toxicity monitoring, as well as the threshold to initiate a TRE if a pattern of effluent toxicity has been demonstrated.

Test of Significant Toxicity (TST)

Order No. R1-2012-0026 established a numeric chronic toxicity trigger of 1.0 TUc = 100/NOEC, using a five-concentration hypothesis test. In 2010, U.S. EPA endorsed the peer-reviewed *Test of Significant Toxicity (TST) two-concentration hypothesis testing approach in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) as an improved hypothesis-testing tool to evaluate data from U.S. EPA's toxicity test methods. The TST hypothesis testing approach more reliably identifies toxicity—in relation to the chronic (0.25 or more) mean response of regulatory management concern—than the NOEC hypothesis-testing approach. The TST hypothesis testing approach more reliably identifies toxicity – in relation to the acute (0.20 or more) mean responses of regulatory management concern – than the No Observed Effect Concentration (NOEC) approach used previously to establish effluent limitations for acute toxicity.

Since the TST approach has not previously been applied for determining reasonable potential or establishing effluent limitations for acute toxicity, this Order does not

include effluent limitations for acute toxicity based on the TST approach. However, this Order does require the Permittee to monitor and report results in a manner that will allow the Regional Water Board to conduct an RPA in accordance with the TST approach at the time of the next permit renewal.

The State Water Board is developing a toxicity amendment to the *Water Quality Control Plan for Enclosed Bays and Estuaries of California* that will standardize the regulation of aquatic toxicity for all non-oceanic surface waters. U.S. EPA's TST approach is an essential component of this draft toxicity amendment as it forms the basis for utilizing numeric water quality objectives and acts as the primary means of determining compliance with the proposed effluent limitations.

In a letter dated February 12, 2014, the State Water Board submitted an alternative test process (ATP) request to U.S. EPA Region 9 for the statewide use of a two-concentration toxicity test design when using the TST approach. This two-concentration test design is composed of a single effluent concentration and a control concentration. U.S. EPA approved the ATP request on March 17th, 2014. In June 2014, the approval was challenged in court on procedural grounds under the Administrative Procedures Act by the Southern California Alliance of Publicly Owned Treatment Works (SCAP) and the Central Valley Clean Water Association (CVCWA). The U.S. EPA withdrew the approval and notified State Water Board in a memo dated February 11, 2015.

It is important to note that U.S. EPA's rescission of its approval of the ATP is not based on the substantive TST statistical analysis or the scientific validity of a two-concentration test design. The withdrawal letter also states that currently there is a proposed rulemaking to change the language in the ATP regulations at 40 C.F.R. part 136.

The benefits of requiring the TST in new or amended permits include improving the statistical power of the toxicity test, and simplifying the analysis as compared to the traditional hypothesis statistical approaches or point estimates. The calculations are straightforward and provide a clear pass/fail result. With the withdrawal of the two-concentration test design approval, an NPDES permit can still require the TST for statistical analyses. Toxicity tests shall be run using a multi-concentration tests design in accordance with 40 C.F.R. section 136.3, and the TST shall be utilized with the biological responses from the permitted in-stream waste concentration (IWC) and the control (effluent concentration of zero). However, even with only two of the five concentration biological responses being used, cost savings in the form of time and effort are still realized for the statistical analysis and data interpretation carried out by the Permittee, lab, and permit manager. This Order requires application of TST for statistical analysis of whole effluent toxicity data.

Tests of Significant Toxicity Design

The TST's null hypothesis for chronic toxicity is:

H_0: Mean response (In-stream Waste Concentration (IWC) in % effluent) ≤ 0.75 mean response (control).

Results are analyzed using the TST approach and an acceptable level of chronic toxicity is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

The chronic IWC (in % effluent) for Discharge Point 001 is 100%. The chronic toxicity trigger for Discharge Point 001 is expressed as a null hypothesis (H_0) and

regulatory management decision (b value) of 0.75 for the chronic toxicity methods in the MRP. The null hypothesis for this discharge is:

H_0: Mean response (100% effluent) ≤ 0.75 mean response (control).

Results shall be analyzed using the TST hypothesis testing approach in section V.B.6.a of the MRP. Compliance with this chronic toxicity limitation is demonstrated by rejecting the null hypothesis and reporting "Pass" or "P".

When the chronic toxicity test results in a "Fail" or "F," the Permittee must initiate accelerated monitoring as specified in the MRP (Attachment E, section V). After accelerated monitoring, if conditions of chronic toxicity are found to persist, the Permittee will be required to conduct a TRE, as described by the MRP.

Notification requirements for chronic WET testing include a 72-hour verbal notification requirement and a 14 day written report requirement, if test results indicate toxicity. The 14 day written notification is established in the U.S. EPA WET Guidance documents cited in the MRP. The 72-hour verbal notification requirement is being added to provide the Regional Water Board with knowledge of the toxicity in advance of the written report. The 72-hour requirement is intended to give the Permittee sufficient time to make a telephone call to Regional Water Board staff and accounts for non-working days (e.g., weekends). Verbal notification of WET test exceedances may be left by voice mail if the Regional Water Board staff person is not immediately available by telephone.

This Order includes a requirement for the Permittee to conduct a screening test using at least one vertebrate, invertebrate, and plant species. After the screening test is completed, monitoring can be reduced to the most sensitive species.

Chronic WET limitations will be established if future monitoring results demonstrate that discharges from the Facility are causing or contributing to chronic toxicity in the receiving water.

This Order includes an effluent limitation for acute toxicity in accordance with the Basin Plan, which requires an absence of toxicity in the treated effluent. Discharges shall be in compliance with this limitation when the survival of aquatic organisms in a 96-hour bioassay of undiluted waste complies with a 90 percent median survival for any three or more consecutive bioassays. This effluent limitation is retained from Order No. R1-2012-0026. No single test shall have less than 70 percent survival.

H. Final Effluent Limitations

Effluent limitations established by the Order are based on the understanding that hexavalent chromium and other forms of chromium attributable with the discharge of chromic acid to the former burn dump can be treated to nondetectable concentrations using available treatment technologies. Organic pollutants that may be detected in groundwater can also be treated to nondetectable concentrations. However, inorganic pollutants that may be present naturally in groundwater may be discharged to Darby Creek only at or below background concentrations in the receiving water, and can be discharged to land via spray irrigation at or below the background concentrations found in groundwater. The Monitoring and Reporting Program requires sampling for inorganic pollutants in Darby Creek to establish background concentrations.

Final effluent limitations are established by Section IV of the Permit.

I. Interim Effluent Limitations

This Permit does not include interim effluent limitations.

J. Land Discharge Specifications

This Permit allows the discharge of highly treated groundwater to land under the control of the WERT and City of Willits. No runoff to surface water of highly treated groundwater from the irrigation area is allowed.

K. Reclamation Specifications

This Permit allows the discharge of highly treated groundwater to land. The reclamation requirements for wastewater from sewage treatment facilities do not apply to this Permit.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

B. CWA section 303(a-c) requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan.

The Basin Plan states that "[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional [Water] Board will apply to regional waters in order to protect the beneficial uses." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, bacteria, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity.

The Basin Plan contains numeric and narrative water quality objectives applicable to all surface waters within the North Coast Region. Water quality objectives include an objective to maintain the high quality waters pursuant to federal regulations (40 CFR 131.12) and State Water Board Resolution No. 68-16. Receiving water limitations in this Permit have been updated to reflect Basin Plan objectives for inland surface waters, enclosed bays, and estuaries contained in Chapter 3 of the Basin Plan.

Additionally, the Basin Plan contains water quality objectives applicable to specific water bodies in the North Coast Region. Water body specific objectives have been published as Table 3-1 in the Basin plan and include objectives for specific conductivity, total dissolved solids, dissolved oxygen, pH, hardness, and boron for applicable water bodies. This Permit establishes receiving water limitations based on these specific water quality objectives which are applicable to any discharge occurring in a listed water body. Receiving water limitations for specific water bodies include:

Unless more stringent water quality objective for dissolved oxygen are established, the waste discharge shall not cause the dissolved oxygen concentration of the receiving waters to be depressed below 7.0 mg/lg/L at any time nor below 9.0 mg/Lg/L during critical spawning and egg incubation periods. In the event that the receiving waters have background dissolved oxygen concentrations of less than these levels, discharges shall not depress dissolved oxygen concentrations below existing levels.

Unless more stringent water quality objectives for pH are established, the discharge shall not cause the pH of the receiving waters to be depressed below 6.5 nor raised above 8.5.

The discharge shall not cause receiving water pH to change more than 0.5 units at any time.

Additionally, this Permit establishes the following receiving water limitation:

The discharge shall not substantially contribute to exceedances of water quality objectives for specific waters of the North Coast Region that are established in Table 3-1 of the Basin Plan for specific conductance, total dissolved solids, hardness, and boron. In the event that receiving waters have background conditions for these parameters at levels that already exceed water quality objectives, dischargers shall not cause or contribute to a further exceedance of existing conditions.

C. Groundwater

Groundwater limitations included in the proposed draft Permit were derived from Water Quality Objectives for Groundwater contained in Chapter 3 of the Basin Plan.

1. The beneficial uses of the underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, aquaculture, Native American culture, and freshwater replenishment to surface waters.
2. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.
3. Discharges from the Facility shall not cause exceedance of applicable water quality objectives or create adverse impacts to beneficial uses of groundwater.
4. The Basin Plan requires that waters designated for use as MUN shall not contain concentrations of chemical constituents in excess of the limits specified in CCR, title 22, division 4, chapter 15, article 4.1, section 64435, and article 5.5, section 64444.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 C.F.R. 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 (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

The MRP has different effluent monitoring requirements for discharges to surface water (Darby Creek) and discharges to land via a spray irrigation system. While the Discharger has acquired an NPDES permit, no discharge to Darby Creek has occurred. Analytical testing results indicate volatile organic compounds (VOCs) are seldom detected, and when they have been detected the concentrations have been at or near the laboratory detection limit. Based on this consistent and extensive history of the analytical results for VOCs, discontinuation of monitoring for VOCs is appropriate. Discontinuation of the VOCs monitoring does not constitute backsliding since there is no significant VOCs detected in the influent.

A. Influent Monitoring

1. Influent monitoring requirements at Monitoring Location M-INF for hexavalent chromium is retained from Order No. R1-2012-0026.
2. Influent monitoring requirements for VOCs are discontinued at Monitoring Locations M-INF from Order No. R1-2012-0026.

B. Effluent Monitoring for Land Disposal Discharge

Effluent monitoring requirements are necessary to determine compliance with prohibitions and/or effluent limitations established by the Order. Monitoring at Monitoring Location M-001 is necessary to demonstrate compliance with effluent limitations and demonstrate whether or not the discharge poses reasonable potential for a pollutant to exceed any numeric or narrative water quality objectives.

1. Effluent monitoring frequencies and sample types for flow, temperature, pH, turbidity, dissolved oxygen, and hexavalent chromium have been retained from Order No. R1-2012-0026.

2. Effluent monitoring data indicates that the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives for VOCs. Therefore, this Order discontinues effluent monitoring requirements for VOCs from Order No. R1-2012-0026.

C. Effluent Monitoring for a Surface Water Discharge

Receiving water monitoring is required to determine compliance with prohibitions and/or impacts to receiving water. Monitoring at Monitoring Location R-001 and R-002 is necessary to demonstrate compliance with effluent limitations and demonstrate whether or not the discharge poses reasonable potential for a pollutant to exceed any numeric or narrative water quality objectives.

Acute toxicity monitoring of effluent is required annually to determine compliance with the whole effluent acute toxicity limitation established in this Permit.

Chronic toxicity monitoring of effluent is required one time every five years to determine compliance with the narrative water quality objective for toxicity expressed by the Basin Plan.

Monitoring of constituents contained in Tables E-8 and E-9 of Attachment E (CTR and Title 22 pollutants) in the effluent and in the receiving water is required once every five years to assess compliance with effluent limitations and receiving water prohibitions.

D. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (WET) monitoring requirements are included in this Order to protect the receiving water quality from the aggregate effect of a mixture of pollutants in the effluent. Acute toxicity testing measures mortality in 100 percent effluent over a short test period and chronic toxicity testing is conducted over a longer time period and may measure mortality, reproduction, and/or growth.

1. Acute Toxicity

To determine compliance with the acute toxicity limitation, the Permit establishes an annual monitoring requirement for acute toxicity. Because ground water quality typically changes very slowly over time, the Regional Water Board has determined that wastewater influent and effluent quality from authorized sites will be relatively stable, and annual monitoring will provide a sufficient determination of compliance.

2. Chronic Toxicity

To determine compliance with the Basin Plan's narrative water quality objective for toxicity, the Permit establishes a monitoring requirement for chronic toxicity of one time every five years, which satisfies the requirement of The Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California to use short-term chronic toxicity tests to determine

compliance with the Basin Plan's water quality objective for toxicity. Because discharges from authorized sites are temporary, until remediation is completed, the Regional Board has determined that acute (instead of chronic) toxicity monitoring will be more meaningful in assessing compliance with the Basin Plan's narrative objective for toxicity. Although the monitoring frequency for chronic toxicity is infrequent, chronic toxicity monitoring is required within the first three days of operation of a newly authorized pump-and-treat operation. If chronic toxicity is present in effluent from a newly authorized facility, the conditions will be discovered immediately after operation is initiated and corrective steps will be taken.

In addition to routine toxicity monitoring, this Order requires the Permittee to have a TRE Workplan, in accordance with appropriate U.S. EPA guidance to ensure that the Permittee has a plan to immediately move forward with the initial tiers of a TRE in the event effluent toxicity is encountered in the future. The TRE is initiated by evidence of a pattern of toxicity demonstrated through the additional effluent monitoring provided as a result of an accelerated monitoring program.

E. Receiving Water Monitoring

1. The draft Monitoring and Reporting Program includes monitoring of Darby Creek for toxic pollutants and acute and chronic toxicity in order to monitor effluent impacts on receiving water quality, if a discharge to Darby Creek is implemented.
2. Compliance with receiving water limitations will be demonstrated by monthly and quarterly grab samples taken upstream and downstream of the Discharge Point at points R-001 and R-002 when discharging to Darby Creek.

VII. RATIONALE FOR PROVISIONS

A. Standard 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.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in section 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Regional Water Board Standard Provisions

Regional Water Board Standard Provisions are based on the Clean Water Act, U.S. EPA regulations, and the California Water Code.

C. Special Provisions

1. Reopener Provisions

Standard Revisions (Provision VI. C.1.a). This provision contains a reopener provision that allows the Regional Water Board to reopen this Permit to modify its conditions and requirements in accordance with 40 CFR section 122.62.

2. Special Studies and Additional Monitoring Requirements

Toxicity Reduction Requirements.

Dischargers are required to prepare, maintain, and update, as necessary, a Toxicity Reduction Evaluation (TRE) Workplan, which must be implemented when acute or chronic toxicity is persistent in effluent as determined by accelerated monitoring. The TRE Workplan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Workplan must be developed in accordance with guidance from the USEPA's Office of Research and Development. Resources can be found at:

http://water.epa.gov/scitech/swguidance/methods/wet/index.cfm

Following initiation of a TRE, if the cause of toxicity cannot be identified and eliminated within a reasonable period of time, as determined by the Executive Officer, the Discharger shall discontinue the discharge to receiving water and submit an evaluation to the Regional Water Board regarding alternate disposal methods or treatment system modifications that are proposed to correct the toxicity in the effluent. The Discharger shall correct the toxicity to the satisfaction of the Executive Officer prior to resuming a surface water discharge.

3. Best Management Practices and Pollution Prevention

This section of the standarized permit template is not applicable to discharges under this Permit.

4. Construction, Operation, and Maintenance Specifications

a. Operation and Maintenance Manual. 40 CFR 122.41(e) requires proper operation and maintenance of permitted wastewater systems and related facilities to achieve compliance with permit conditions. An up-to-date operation and maintenance manual, as required by Provision VI.C.2.d of the Order, is an integral part of a well-operated and maintained facility.

b. Granular Activated Carbon Quality Control/Quality Assurance. The Discharger must implement a Quality Control/Quality Assurance (QA/QC) Program to ensure that newly replenished granular activated carbon in the treatment system is providing high quality effluent with respect to pH, ammonia, and inorganic constituents. Activities conducted as part of the GAC/QC program shall be documented in routine Discharge Monitoring Reports submitted for the Facility.

5. Special Provisions for Municipal Facilities (POTWs Only)

This Permit is not applicable to discharges from POTWs.

6. Other Special Provisions

a. Stormwater. This provision requires the Discharger, if applicable, to comply with the State's requirements relating to industrial storm water activities.

Currently, the Facility is exempted from these requirements because this Facility does not have storm water discharges.

7. Compliance Schedules

This Permit does not include compliance schedules.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, North Coast Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Page Property groundwater extraction and treatment system. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified Dischargers enrolled in Order No. R1-2012-0026 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. Notification was provided through specific mailings to interested parties, Press Democrat and Ukiah Daily Journal Newspapers, and posting on the Regional Water Board's Internet site at: http://www.waterboards.ca.gov/northcoast/public_notices/notice_of_consideration/ on September 5, 2017.

B. Written Comments

Staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments must be submitted either in person, by e-mail, US Postal mail, Federal Express or UPS to the Executive Office at the Regional Water Board at the address on the cover page of this Permit.

To be fully responded to by staff and considered by the Regional Water Board, written comments must be received at the Regional Water Board offices by 5:00 p.m. on **October 5, 2017**.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: December 13, 2017

Time: 8:30 a.m.

Location: Regional Water Board
David C. Joseph Hearing Room
5550 Skylane Blvd., Suite A
Santa Rosa, California 95403

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is www.waterboards.ca.gov/northcoast where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling 707-576-2220.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this Facility, and provide a name, address, phone number and e-mail address.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Cody Walker at 707-576-2642 or at cody.walker@waterboards.ca.gov.