

Responses to Comments

Permit by Rule for Treatment of Aqueous Wastes Containing Cyanides

Department Reference Number: R-96-48

The Administrative Procedure Act requires that draft regulations be made available for public review for a period of at least 45 days. Copies of the proposed regulations were made available to the public from June 15, 2007 to July 31, 2007.

Post hearing, the draft regulations were revised to incorporate public comments and were made available for public review during two supplemental 15-day renote periods. The first 15 day notice period started on February 1, 2008 and ended on February 19, 2008. The second 15-day public comment period occurred May 1 through May 16, 2008. A 30-day public comment period for the draft negative declaration and initial study began on April 15, 2008 to comply with the California Environmental Quality Act.

DTSC must then summarize each of the comments received and provide an explanation of how the proposed rule has been changed to accommodate each objection or recommendation, or the reasons for making no change. This requirement applies only to objections or recommendations specifically directed at the agency's proposed action.

The term "outside of the scope of this rulemaking" does not mean that the comment is irrelevant to the subject matter of aqueous waste containing cyanide treatment. This term indicates that the recommendation or objection made by the commenter is either a) not specifically directed at the proposed language or b) addresses existing regulations which are not under review.

DTSC received a total of 9 written comments and 10 persons provided oral testimony at the hearing held in Sacramento on July 31, 2007. Four comments were received during the public comment period in February and one during May. The commenters are listed below in the order the comments were received. Comments are sorted and organized by topic issues. Each comment has an alphanumeric number. The alphabet letter is a code for each of the commenters and the number represents individual comments within each written letter or oral testimony. In some cases the Commenter submitted two sets of comments thus the commenter name on the list below will appear multiple times.

Each of the subject issues is prefaced with a master response. The last categories of responses are aggregated which means they are either repetitive of other comments, or do not make a specific requested change in the proposed regulation. Appendix A is an alphanumeric list of all the comments. Copies of letters are located in Tabs D, G and J of the administrative file.

Table 1

Letter Code	Commenter Code	Commenter
A	BELM	Blue Eagle Lode Mining Co <i>-Burton, John</i>
B	CUPA	California CUPA Forum Board <i>-Susan Williams, Hazardous Waste Coordinator</i>
C	CDMS	Chemical Data Management Systems <i>- Will Martin, Vice President</i>
D	MFASC	Metal Finishing Association of Southern California, Inc. and Surface Technology Association <i>- Frank Altmayer, MFS Consultant</i>
E	IPC	IPC Association Connecting Electronic Industries <i>- Fern Abrams, Director of Environmental Policy</i>
F	W&W	Wactor & Wick LLP <i>- John Wactor</i>
G	KAI	Kyocera America, Inc <i>- Eiji Tanaka, Vice President</i>
H	SA	Strandberg Associates <i>- John Strandberg</i>
I	FF	FormFactor, Inc. <i>- Steve Van Tassell, Sr. EHS Specialist</i>
Hearing Comments		Public Hearing, July 31, 2007
J	MFASC	Metal Finishing Association of Southern California, Inc. and Surface Technology Association <i>- Jerry Desmond, Jr., Legislative Advocate</i>
K	MFASC	Metal Finishing Association of Southern California, Inc. and Surface Technology Association <i>- Daniel Cunningham, Executive Director</i>
L	VCPI	Valley Chrome Plating, Inc <i>- Ray Lucas, President</i>
M	CC	Chrome Craft <i>- John Marrs, General Manager</i>
N	SCL	Scientific Control Lab <i>- Frank Altmayer, Consultant</i>
O	MSI	Metal Surfaces, Inc <i>- Willie Bell, Vice President</i>
P	MSI	Metal Surfaces, Inc <i>- Sam Bell, Vice President</i>
Q	W&W	Wactor & Wick, LLP <i>- Peter Ton, environmental attorney</i>
R	KAI	Kyocera America, Inc <i>- Meridith Marquis</i>
S	KAI	Kyocera America, Inc <i>Eiji Tanaka, Vice President</i>

Letter Code	Commenter Code	Commenter
Post Hearing		15-day Supplemental Public Notice, Feb 1-19, 2008
T	SG	Stratagene - <i>Daniel Mac Neil, Safety Specialist</i>
U	FF	FormFactor, Inc - <i>Steve Van Tassell, Sr. EHS Specialist</i>
V	IPC	IPC Association Connecting Electronic Industries - <i>Sahar Osman-Sypher, Project Manager</i>
W	MFASC	Metal Finishing Association of Southern California, Inc. and Surface Technology Association - <i>Daniel Cunningham, Executive Director</i>
Post Hearing		15-day Supplemental Public Notice, May 1-16, 2008
X	CR	County of Riverside - <i>Paul Mitchel</i>

Context of the Proposed Rule/Informative Digest

Existing law and regulations do not authorize the treatment of aqueous wastes containing cyanides without a form of authorization from DTSC. Presently, the authorization required for this type of treatment is a standardized permit. In this proposed regulation, DTSC would expand the eligible waste streams and treatment technologies allowed under the Permit by Rule (PBR) regulations found in California Code of Regulations, section 67450.11 to include the treatment of aqueous waste containing cyanides. A business could under this proposed rule treat cyanide-containing aqueous wastes onsite. Previous to this proposal, any aqueous wastes at concentrations in excess of the state regulatory limits for classification as an extremely hazardous waste or a reactive waste had been excluded from the PBR permitting tier.

The PBR authorization is self-implementing permitting authorization for the treatment of hazardous waste carried out on the site where the hazardous waste was generated (“onsite”). After notifying the local Certified Unified Program Agency of the treatment activity, the business then must certify compliance with the numerous protective standards of a PBR.

DTSC is not making changes to any other requirements applicable to generators of hazardous waste or to the existing hazardous waste management standards for PBR. All other provisions governing generators operating under PBR (unit specific standards, recordkeeping, financial assurance, etc...) remain unchanged or have been modified (approval for wastewater discharges and waste analysis plan). This proposed regulation is simply regulatory relief that would allow handlers of aqueous cyanide waste to take advantage of a lower tier of permitting for the treatment of this hazardous waste.

All citations in this document reference California Code of Regulations, title 22, division 4.5 unless otherwise stated.

WASTE CHARACTERIZATION OR WASTE DETERMINATION

Master Response 1: A "generator" is any person, by site, whose act or process produces hazardous waste or whose act first causes a hazardous waste to become subject to regulation (§ 66260.10). It is the generator's responsibility to determine if the waste they produce is hazardous waste. This evaluation should be performed at the initial point of generation, prior to any treatment when the waste first becomes subject to regulation. Generators may base their evaluations on either an analysis of the waste or the generator's knowledge of the materials or the processes used.

Cyanide containing waste may be hazardous due to a characteristic such as toxicity or reactivity, or may be hazardous due to the manner in which the waste was generated ("listed"). Appendix X of chapter 11 of title 22 of California Code of Regulations specifically lists the following cyanide chemicals: barium cyanide, bromide cyanide, cadmium cyanide, copper cyanide, hydrogen cyanide, lead cyanide, mercury cyanide, nickel cyanide, potassium cyanide, sodium cyanide, zinc cyanide, cyanide salts, and spent (or waste) cyanide solutions. If a waste consists of or contains a chemical listed in Appendix X it is presumed to be hazardous waste, unless determined otherwise.

It is outside of the scope of this proposed regulation to attempt to set a lower threshold limit for all cyanide containing waste. Too much variability exists in the formulation of cyanide process solutions and the resulting aqueous waste generated. Additionally, most of the aqueous wastes addressed by this rulemaking contain various metals that add toxicity and can be classified as hazardous wastes independent of cyanides.

Commenter Comment #	Comment	California Code of Regulations	Response
WASTE CHARACTERIZATION/DETERMINATION			
IPC	E-3	Commenter requests that wastewater be defined in the regulatory language to eliminate confusion regarding the scope of the proposed regulations and specifically to exclude process baths from the definition.	§67450.11(d)(2) (B) Although the term "wastewater" is defined in §66260.10, the definition is limited to chapter 18. The proposed text uses the term "aqueous waste" as defined in §66450.11 subsec. (b) to avoid this confusion. Wastewater is a commonly used industrial term to describe water discharges.
MFASC	D-18	Commenter requests that "aqueous waste be defined and recommends the un-dissolved solids should be limited to 10% or less by weight.	§66260.10 §67450.11(d)(5) Definition is already provided in §67450.11 subsec. (b). "For purposes of this section an aqueous waste is defined as a waste containing water, and less than or equal to one percent of suspended solids, as measured by Method 209C described in "Standard Methods for Examination

Commenter Comment #	Comment	California Code of Regulations	Response	
WASTE CHARACTERIZATION/DETERMINATION				
			of Water and Wastewater," 16th Edition, published jointly by the American Public Health Association, the American Water Works Association, and the American Pollution Control Federation, 1985."	
CUPA	B-1	Commenter requests DTSC to provide the lower threshold concentration of cyanide in wastewater to determine when this wastewater is deemed to be hazardous waste or provide additional clarification for cyanide-containing wastewater hazardous waste characterization.	§67450(d)(1) Chapter 11	Outside of the scope of this rulemaking. This is a hazardous waste determination question. The hazardous characteristics of cyanide containing aqueous wastes depend on many variables, such as the toxicity of the type of cyanide used, the concentration of other co-contaminates, the temperature and the pH of the solution. Depending on the hazardous characteristic, cyanide containing aqueous waste can be classified as hazardous, extremely hazardous, and/or reactive. See Master Response 1 for more details.
IPC	E-4	Commenter recommends that DTSC establish a de minimus concentration for the applicability of the cyanide PBR. As such, the proposed PBR rule will apply to rinse tanks in which cyanide concentrations are below 1 milligram per liter (mg/l) and are suitable for discharge to a Publicly Owned Treatment Works (POTW) under federal Clean Water Act (CWA) limits.	§67450.11(d)(1) §66261.4	Outside of the scope of this rulemaking. This is a hazardous waste determination question. The industrial wastewater exclusion pursuant to § 66261.4 subsec. (a)(1) applies only to the actual point source discharge, but it does not exclude industrial wastewaters while they are being collected, stored or treated before discharge. The proposed PBR rule will apply to aqueous wastes with cyanide concentrations below 1 mg/l if they are hazardous waste and require treatment prior to discharge. However, if aqueous wastes (with cyanide concentrations below 1 mg/l) are hazardous waste, but do not require treatment prior to discharge, there is no need for PBR authorization. See Master Response 1 for more details.
IPC	V-1	Commenter believes that the running rinse tanks that are part of a process line should not be covered by the proposed cyanide treatment PBR regulations because the cyanide content is below the federal discharge limits for cyanide.	§67450.11(d)(1)	If the running rinse tanks are part of the process, then the rinse tanks are not waste tanks and are not subject to hazardous waste control laws. Once the generator decides to discard the rinse water, the generator must make a hazardous waste determination. If the wastewater is hazardous and requires treatment prior to discharge into a POTW, authorization is required for treatment. If the wastewater does not require treatment to meet the discharge limits, then no authorization is required. Either way it is outside of the scope of the proposed rule.
IPC	V-2	Commenter urges DTSC to	§67450.11(d)(1)	This issue is outside of the scope of this

Commenter Comment #	Comment	California Code of Regulations	Response
WASTE CHARACTERIZATION/DETERMINATION			
	include a clear statement in the proposed regulations that rinses that contain less than 0.65 mg/l total cyanide or meet the local discharge limit, whichever is lower, should not be subject to the cyanide PBR.		proposed rule. DTSC agrees that if rinses contain less than 0.65 mg/l total cyanide or meet the local discharge limit, a generator could discharge this water into the POTW and would not need PBR authorization for treatment.
IPC	V-6 Commenter notes that §66261.10 does not define cyanide as a hazardous waste.	§67450.11(d)(1)	Depending on the concentration of the cyanide, cyanide may exhibit various hazardous characteristics. Cyanide containing wastewaters can be hazardous due to the oral toxicity (LD ₅₀) of the cyanide, the aquatic toxicity (24 hour Aquatic LC ₅₀) of the cyanide, or the combined toxicity or aquatic toxicity of both the cyanides and the metals dissolved in the solutions. At higher concentrations, cyanide may meet the definition of extremely hazardous (§66261.110). If a cyanide-containing aqueous waste can generate toxic gases in a quantity sufficient to present a danger to human health, then it is reactive (§66261.23). The commenter is incorrect. Various cyanide compounds are specifically listed in Appendix X of chapter 11. If a waste consists of or contains any of the chemicals on this list, the waste is presumed to be a hazardous waste, unless it is determined that the waste is not a hazardous waste pursuant to the procedures set forth in section 66262.11.
IPC	V-7 Commenter states that aquatic toxicity tests are expensive and that testing is both an administrative and cost burden to facility for rinse waters that meet federal and local cyanide limits for discharge to a POTW.	§67450.11(d)(1)	The requirements for the aquatic toxicity tests (§66261.24(a)(6)) are outside of the scope of this rulemaking. Please refer to the response to Comments E-4 V-2, and V-6 for additional details as to the waste determination requirements for rinse wastewater.
IPC	V-8 Commenter stated that DTSC staff recommended analyzing rinse waters for possible hydrogen cyanide evolution and feels that this requirement does not appear to be based in regulation that has gone through the rulemaking process.	§67450.11(d)(1)	The requirements for the reactivity tests (§66261.23) are outside of the scope of this rulemaking. Please refer to the response to Comments E-4 V-2, and V-6 for additional details as to the waste determination requirements for rinse wastewater.
IPC	V-9 Commenter states that testing to quantify the generation of hydrogen cyanide gas is both an administrative and cost burden to facility for rinse waters that meet federal and	§67450.11(d)(1)	The requirements for the reactivity tests (§66261.23) are outside of the scope of this rulemaking. Please refer to the response to Comments E-4 V-2, and V-6 for additional details as to the

Commenter Comment #	Comment	California Code of Regulations	Response
WASTE CHARACTERIZATION/DETERMINATION			
	local cyanide limits for discharge to a POTW.		waste determination requirements for rinse wastewater.
IPC	V-10	Commenter presents the calculation to determine how much volume of cyanide-containing aqueous waste at .65 mg/l would generate hydrogen cyanide (HCN) concentrations in excess of OSHA permissible exposure levels (PEL).	§67450.11(d)(1) The requirements for the reactivity tests (§66261.23) are outside of the scope of this rulemaking. The comparison to permissible exposure levels is not appropriate. The comparison should be to hydrogen cyanide concentrations that are "Immediately Dangerous to Life and Health" or IDLH.
IPC	V-11	Commenter states that the proposed cyanide treatment methods do not list any acceptable treatment levels. DTSC is encouraged to clarify applicability of the proposed rule.	§67450.11(d)(3) Specifying the treatment levels is outside of the scope of this rulemaking. The acceptable treatment levels are based on the final disposition of the waste. If the waste is to be discharged to the POTW, then treating to the permitted effluent limits is appropriate. However, the final disposition may be something else and may need to comply with other local, state or federal requirements.
IPC	V-12	Commenter encourages DTSC to include a statement that any aqueous cyanide-containing waste be excluded from the regulations.	§67450.11(d)(1) This issue is outside of the scope of this proposed rule. See response to Comment V-2 for details.

APPLICABILITY Section 67450.11(d)(1)

Master Response 2: The applicability of this proposed rule reiterates section 67450.11 subsection (a) with a very important distinction. Unlike subsection (a), the applicability under section 67450.11 subsection (d) allows for the treatment of waste streams which may be reactive or may be extremely hazardous with additional conditions. Once adopted, these regulations will allow the destruction of cyanides which may then be followed by other treatment currently allowed by the pre-existing PBR program, such as treatment of metal ions, pH adjustment, or neutralization necessary to dispose of the hazardous waste or the aqueous residuals. Please refer to page 13 of the Initial Statement of Reasons for an overview of the philosophy of the PBR program.

Commenter Comment #	Comment	California Code of Regulations	Response
APPLICABILITY			
W&W	F-3	Commenter states that current	§67450.11(d)(1) Commenter has misunderstood the fact sheet.

Commenter Comment #	Comment	California Code of Regulations	Response
APPLICABILITY			
	regulations do not differentiate “cyanide-bearing” aqueous waste streams from other aqueous waste streams authorized for treatment under PBR. In 1992, DTSC issued a fact sheet stating that the treatment of aqueous waste was covered by the then-current PBR regulations.		The Fact Sheet states that cyanide bearing waste streams are not one of the twelve waste streams addressed by the PBR regulations. However, certain cyanide bearing waste streams may be treated under PBR if the concentration of cyanide is not high enough to classify the waste as extremely hazardous or reactive. This proposed regulation allows for the treatment of specified cyanide-containing aqueous waste which may be reactive or extremely hazardous and specifically lists cyanide destruction technologies.
W&W	Q-2	Commenter states that the proposed PBR regulations don’t expressly differentiate between cyanide-bearing aqueous wastes from other types of aqueous waste. DTSC should use less onerous rulemaking documents to supplement existing regulations rather than the formal rulemaking process.	§67450.11(d)(1) See response to comment F-3 above for more detail.
KAI	G-1	Commenter requests that onsite treatment of aqueous cyanide solution be regulated using the least burdensome tier unless there is clear and convincing reason not to regulate at that minimal level.	§67450.11(d)(1) PBR is the most appropriate tier. Standardized permit is the current requirement and is more burdensome because it requires the submittal of a permit application for review and approval. Spent process solutions and other cyanide containing aqueous waste may be reactive and extremely hazardous. The treatment of waste which is reactive or extremely hazardous is ineligible for conditional authorization pursuant to Health and Safety Code §25200.3 subdiv. (d)(5) and ineligible for Conditionally Exempt Small Quantity Treatment pursuant to Health and Safety Code § 25201.5. However, if the waste is not reactive or extremely hazardous and the treatment volume is not more than 55 gallons per month, Conditionally Exempt Small Quantity Treatment may be an option.

EXPANDING ELIGIBLE WASTE STREAMS, Section 67450.11(d)(2)

Master Response 3: There were many requests for changing or expanding the eligible waste streams to include aqueous waste generated by reverse osmosis, anode bags and resulting rinseate, filters and resulting rinseate, contaminated containers and resulting

rinseate, cleanup spills, and laboratory waste. DTSC chose to add only the waste streams that allow the reduction of water use or that facilitate the recycling/reuse of peripheral equipment such as empty product drums and anode bags.

For product drums, the container residuals remaining in a container that held a cyanide commercial product is a listed Resource Conservation Recovery Act (RCRA) waste, unless the container is empty and the empty product drum is shipped offsite for reconditioning or scrap value. The rinsing of a “contaminated container” requires authorization which is currently eligible under existing Permit by Rule (§67450.11 subsec. (a)(11)).

Permit authorization for rinsing product drums and anode bags when spent is not required if these are recycled and used at the same facility at which the material was generated. The facility will still need authorization to treat the resulting rinseate, so these rinseates have now been added to the revised language for clarification (Health and Safety Code §25143.2(c)(2)(A)).

Commenter Comment #	Comment	California Code of Regulations	Response	
EXPANDING ELIGIBLE WASTE STREAMS				
CUPA	B-2	Commenter questions the validity of the 5,000 parts per million (ppm) for the bleeding of process baths. Commenter believes limiting cyanide concentrations to 1,500 ppm for all the allowed aqueous waste is more appropriate because DTSC utilized this concentration in consent orders that have authorized the treatment of cyanide-containing waste water in the interim. This lower concentration has not resulted in any documented incidences.	§67450.11(d)(2)	Ion exchange solutions may contain cyanide up to approximately 10,000 ppm or mg/l. When generators implement Best Management Practices, cyanide concentrations in aqueous waste tend to be higher than if Best Management Practices are not used. Limiting all aqueous cyanide-containing waste to 5,000 ppm would limit or undermine the application of Best Management Practices. Lowering the concentration limit would require much more water to achieve the lower concentration and reward facilities that do not reduce water use.
W&W	F-4	Commenter requests that DTSC justify the 5,000 ppm limit through case studies showing that metering of higher concentrations solutions must be regulated in a more stringent fashion.	§67450.11(d)(7)(A)	The intent of the proposed rule was the treatment of dilute concentrations of cyanide-containing aqueous waste. The 5,000 ppm is applicable solely as a limitation on bleeding of concentrated spent process solutions. This lower cyanide concentration is necessary to minimize the risk to human health by reducing the potential for hydrogen cyanide gas generation. Commenter has not provided any data that would support raising the concentration of this dilution limit.
SCL	N-15	Commenter requests the language be revised to specify	§67450.11(d)(7)(A)	DTSC revised the language to specify the 5,000 ppm represented total cyanide

		which analytical procedure is to be used for determining the 5,000 ppm concentration.		concentration. Any of the published methods would in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846 would be appropriate as specified under chapter 11 of title 22 of the California Code of Regulations.
IPC	E-5	Commenter contends that the descriptions of the waste streams 1-5 are too broadly and vaguely described and do not clearly define what is or is not covered by the regulations.	§67450.11(d)(2)	The waste streams are referred to as waste stream 1-5 in the public notice only, so commenter is referring to the descriptions in the public notice. These descriptions were intended to be written in plain English for the general public. The descriptions in the proposed language are specific.
IPC	E-6	Commenter requests that DTSC clarify that waste stream 1 or “wastewaters from rinsing work pieces and fixturing” does not include printed circuit board gold drag out rinse baths that are part of the process, and rinse liquids that are not intended for discharge. Recommended language is “Wastewaters from ... that is discharged from a process and intended for eventual facility discharge under an approved permit, but contains cyanide (either amenable cyanide or total cyanide) above permit cyanide discharge limits.”	§67450.11(d)(2)(A)	Defining when specific rinses are a waste is outside of the scope of this rulemaking. The recommended language, “...but contains cyanide (either amenable cyanide or total cyanide) above permit cyanide discharge limits” seems to imply two things which may or may not be true: 1) the wastewater is not hazardous waste if it is below the discharge limits; and 2) the treatment listed in 67450.11(d)(3) is required only to meet discharge limits. For example, treatment may be necessary at a facility which has achieved zero discharge.
IPC	E-8	Commenter recommends that DTSC modify the description of waste stream 3 to include the condition, “intended for either off-site shipment or eventual discharge under an approved permit.”	§67450.11(d)(2)(C)	Adding the recommended language does not provide additional clarification and may restrict aqueous waste intended to be reused or recycled onsite.
ZERO DISCHARGE & REVERSE OSMOSIS				
MFASC	D-4	Commenter request that the requirement for “zero discharge” be lessened. Companies that have partially eliminated discharge of wastewaters or have eliminated the discharge of wastewaters on specific process lines should be allowed to treat ion exchange.	§67450.11(d)(2)(B)	DTSC has revised the proposed rule to lessen the requirement for “zero discharge” if the facility can achieve the elimination of wastewaters derived from the treatment of cyanide containing aqueous waste.
MFASC	D-9	Commenter requests that aqueous waste generated by	§67450.11(d)(2)(B)	DTSC has revised the language to allow the treatment of aqueous waste generated by

		reverse osmosis in facilities that have zero discharge and use reverse osmosis for recycling water be added to the eligible waste streams.		reverse osmosis to encourage water recycling.
		CONTAMINATED DRUMS (hazardous waste when not empty, §66261.7)		
W&W	F-7	Commenter requests that the rulemaking specifically address the rinsing of drums formerly containing cyanide material and should specifically exempt drums from the rinsing requirements when reused solely for storing or handling other cyanide materials.	§67450.11(d)(2)	DTSC has revised the proposed rule to allow for the treatment of aqueous waste that result from onsite recycling of empty containers, such as drums. If a container has been emptied pursuant to §66261.7, it is not regulated as a hazardous waste. However, the aqueous waste generated may be hazardous waste and needs authorization to be treated onsite. Furthermore, existing regulations already address drum rinsing. If rinsing is required to achieve the California definition of “empty container” then treatment is allowed under PBR pursuant to §67450.11 subsec. (a)(11). DTSC will provide additional clarification in the Final Statement of Reasons.
KAI	G-6	Commenter requests that the proposed regulation also authorize the reuse of used cyanide containers from rinsing requirements if they are reused at the same facility for the storage of similar cyanide materials.	§67450.11(d)(2)	See Master Response 3 and the response to Comment F-7 for details.
KAI	S-5	Commenter requests that DTSC clarify the proposed regulations to allow the rinsing of drums containing cyanide product.	§67450.11(d)(2) §67450.11(d)(3)	See Master Response 3 and the response to Comment F-7 for details.
		FILTERS & ANODE BAGS (hazardous waste when spent)		
CDMS	C-1	Commenter stated that once generated, most filters contaminated with cyanide cannot be reused, recycled, or treated. However, Commenter requests that the treatment of rinseate from cleaning filters be eligible for PBR treatment because “the risk posed by the transport and disposal of a more concentrated cyanide waste are equivalent to or greater than the risk posed by the onsite treatment of the rinseate.”	§67450.11(d)(2) §67450.11(d)(3)	These used filters are a listed hazardous waste when removed and the rinsing of spent filters (hazardous waste) is treatment that requires authorization. The proposed treatment (rinsing) for the spent filters is not an effective treatment of this waste as it will not render the filters non hazardous nor deactivate the cyanide to meet Land Disposal Restrictions treatment standards. A recycling exclusion for rinsing these filters is not anticipated due to the lack of reuse options.

MFASC	D-5	Commenter requests that filter units be allowed to be rinsed followed by the treatment of the rinseate in the wastewater treatment system.	§67450.11(d)(2)	See response to Comment C-1 for details.
MSI	O-2	Commenter states that spent filters are currently drummed and shipped offsite.	§67450.11(d)(2)	See response to Comment C-1 for details.
MFASC	D-6	Commenter requests anode bags be allowed to be rinsed followed by the treatment of the rinseate in the wastewater treatment system.	§67450.11(d)(2)	<p>The rinsing of anode bags for onsite reuse is allowed under the onsite recycling exclusion. Spent anode bags are contaminated only with the process solution and do not trap tank bottoms. Anode bags become a solid (and hazardous) waste when they are removed from the plating bath. When removed, they are considered “spent materials” that can be reclaimed (i.e. washed to remove the cyanide solution) prior to reuse. If the reuse is onsite, the rinsing activity is eligible for a recycling exemption pursuant to Health and Safety Code §25143.2 subdiv. (c)(2)(A).</p> <p>DTSC will be revising the language to allow the aqueous waste generated by this recycling activity to be treated under the proposed rule.</p>
OTHER WASTE STREAMS				
MFASC	D-7	Commenter requests that clean up spills less than 5 gallons be allowed to be added to rinsewater then followed by the treatment of the rinseate in the wastewater treatment system.	§67450.11(d)(2)	Spill clean ups will not be added to the proposed rule as this will encourage bad housekeeping practices. It would appear to condone wet floor operations. If the spilled process solution is not a waste, it can be put back into the process tanks for continued use.
MFASC	D-8	Commenter requests that rinsewater from onsite laboratories be routed to the wastewater system for cyanide treatment.	§67450.11(d)(2)	DTSC has revised the language to allow aqueous waste from onsite laboratories to be treated under the proposed rule. This will encourage the use of onsite laboratory activities and it does not increase risk due to minimal volume of waste this activity represents. Process solutions are currently returned to process tanks for continued use.
MFASC	D-10	Commenter concurs with proposal to allow treatment of cyanide-containing wastewater generated by rinsing pumps, hoses and other equipment.	§67450.11(d)(2) (C)	Commenter does not recommend a change.
SG	T-1	Commenter is concerned that the proposed rule excludes some biomedical and pharmaceutical operations that generate a laboratory rinsewater similar in composition and volume to those processes	§67450.11(d)(2)	<p>Commenter has not provided any information on the volume and composition of biomedical and pharmaceutical laboratory rinsewater.</p> <p>The compounds used by these biomedical industries include cyanogen bromides which are organic cyanides and are different than the</p>

		described in the proposed rule. Commenter states that there is absolutely NO difference in the composition and volume of the cyanide-containing aqueous waste that comes from testing and analysis laboratories and the waste generated by biomedical facilities.		metal salts used in metal finishing operations. Furthermore, the volume of wastewater that metal finishing quality control laboratories generate is small. This laboratory wastestream was added because of the small volume and the necessity of these laboratories for process controls, regulatory compliance, and waste minimization.
SG	T-2	To exclude biomedical and pharmaceutical businesses from neutralizing very dilute aqueous cyanide waste will convert those current small quantity generators into large quantity generators and encourage the migration of production activity out of California.	§67450.11(d)(2)	This proposed regulation provides regulatory relief. Small quantity generators should remain small quantity. Large quantity generators may seek to obtain a PBR authorization but would still remain large quantity generators with onsite treatment. Furthermore, Health and Safety Code section 25201.15. currently exempts from permitting biotechnology elementary neutralization activities. This proposed rule does not affect the applicability of this exemption.
SG	T-3	Commenter recommends the proposed rule expand the eligible wastestreams to include “biomedical and pharmaceutical operations that generate a laboratory rinsewater from either equipment washing or manufacturing processes where the cyanide substance was used to prepare a product such as those found in diagnostic test kits.”	§67450.11(d)(2)	Biomedical and pharmaceutical wastestreams are outside of the scope of this rulemaking. Unlike the metal finishing operations, DTSC has conducted very few inspections of biotechnology businesses and does not consider biomedical and pharmaceutical wastestreams to be well characterized or well understood. DTSC will not be revising this proposed rule to include biomedical and pharmaceutical operations that generate a laboratory rinsewater.

EXPANDING OR CLARIFYING ELIGIBLE TECHNOLOGIES

Master Response 4: Some of the Commenters requested that wastewaters should not be included because the discharges are already covered by the CWA under 40 Code of Federal Regulations (CFR), part 433, POTW permits. Although the Regional Water Quality Control Boards’ (RWQCB) has authority to regulate the effluent discharged by industry to protect water, DTSC has sole authority to regulate hazardous waste. If the effluent is hazardous waste, dual authority is required. DTSC authorization (PBR or Standardized Permit) is needed to treat the hazardous waste, and, in addition, RWQCB authorization (discharge permit) is required to allow the discharge. This is true even if the cyanide treatment (under PBR) is the same as the required pretreatment of the discharge.

Commenter Comment #	Comment	California Code of Regulations	Response
EXPANDING OR CLARIFYING ELIGIBLE TECHNOLOGIES			
KAI	R-1	Commenter states that the apparent omissions of some processes from the proposed PBR regulations will create some inefficiency for businesses, increase the cost for businesses, and appear to go against the State's pollution prevention and waste reduction goals.	§67450.11(d)(3) Current baseline is that onsite treatment of aqueous waste containing cyanide requires a standardized permit which has a greater cost to facilities than operating under PBR. The proposed rule is not a new mandatory requirement but provides regulatory relief for those businesses that choose to treat cyanide containing aqueous waste onsite. Not adding additional waste streams results in less economic relief, but not greater cost.
MFASC	D-12	Commenter requests that thermal oxidation should be added to allow the treatment of both dilute aqueous cyanide-containing waste and concentrated process solutions.	§67450.11(d)(3) Thermal oxidation is not allowed under the federal permitting exclusion for onsite treatment. If the treatment is subject to federal permitting requirements, it is not eligible for PBR and is outside of the scope of this rulemaking. However, the recycling exemption (both state and federal) has been used to allow the recycling of wastewater even if it includes thermal oxidation.
MFASC	D-13	Commenter requests that the text be modified in the ISOR to add an additional sentence regarding the pH, "If the pH is allowed to drop below 10.0 during this treatment step, cyanogens chloride gas may be generated."	§67450.11(d)(3) (A) Commenter is not requesting a change in the regulatory language. Comment will be incorporated into the Final Statement of Reasons.
IPC	E-7	Commenter contends that rinse waters should not be included as the discharge from these processes is already covered by a POTW permit under 40 Code of Federal Regulations part 433. The commenter recommends that the waste descriptions be modified to include, "...that is discharged from a process and intended for eventual facility discharge under an approved permit but contains cyanide (either ACN or TCN) above permit cyanide discharge limits." ACN is amenable cyanide	§67450.11(d)(3) The treatment does not need DTSC authorization when the wastewater contains cyanide concentrations below the discharge limits authorized by the RWQCB. DTSC will provide clarification in the Final Statement of Reasons. The RWQCBs have sole authority on the discharge effluent to protect water under CWA. DTSC has sole authority to regulate hazardous waste. Operators need authorization from the RWQCB for discharge permits which specify pretreatment, but also need DTSC to authorize the cyanide treatment of hazardous waste, if necessary to meet the discharge limits. See Master Response 4 for more details.

Commenter Comment #	Comment	California Code of Regulations	Response
EXPANDING OR CLARIFYING ELIGIBLE TECHNOLOGIES			
		and TCN is total cyanide.	
SA	H-1	Commenter requests the precipitation of cynoferrates as ferro-cyanoferrate be authorized in the proposed rulemaking.	§67450.11(d)(3) DTSC will not be adding this technology to the proposed rule. Not enough information has been provided to determine if this technology meets our criteria of addressing the most common waste streams with proven technology.
FF	I-1	Commenter suggests the addition of a precipitation treatment process followed by filtration. In this process, wastewater containing ferricyanide is treated by addition of a soluble iron source which react with the ferricyanide forming an insoluble complex which can then be readily filtered from the water by conventional filtration means.	§67450.11(d)(3) Ferrous salts do not destroy the cyanide but bind it into a complex salt which is then filtered. The cyanide is concentrated in the resulting sludge making it difficult to meet the land disposal restrictions for landfilling. The sludge retains the hazardous waste listing and must have a total cyanide concentration below 590 parts per million to meet the land ban requirement. Although these cyanide precipitates formed by ferrous salt addition are stable, the pH must be mainlined during and after their formation to prevent decomposition and dissolution and bring into question the long term stability of the salt.
FF	U-1	Commenter requests the addition of cyanide precipitation with ferrous salts followed by filtration to the eligible treatment technologies. This technology was cited in the US EPA Capsule Report on Managing Cyanide in Metal Finishing.	§67450.11(d)(3) Although this treatment process was cited in the capsule report, this treatment was noted in the report as being a proposed treatment process used in limited practice. See response to Comment I-1 for addition details.
SA	H-2	Commenter requests the treatment of aqueous cyanide-containing solutions by using strippers and scrubbers be authorized in the proposed rulemaking.	§67450.11(d)(3) DTSC will not be adding these technologies to the proposed rule because of the greater possibility of hydrogen cyanide gas generation. Air stripping is used for treatment of wastewater containing volatile compounds (hydrogen cyanide). The volatile components of the contaminated water are transferred from the water into an air stream, but there is no destruction of the cyanide. Consequently, there are risks of emitting pollutants into the air. Scrubbers are another air pollution control device that can be added to improve removal efficiency. Both of these technologies can be is conducted in tanks and containers and are used in mining. Not enough information has been provided to determine if this technology meets our criteria of addressing the most common waste streams with proven technology.
IPC	V-11	Commenter states that the	§67450.11(d)(3) Specifying the treatment levels is outside of the

Commenter Comment #	Comment	California Code of Regulations	Response
EXPANDING OR CLARIFYING ELIGIBLE TECHNOLOGIES			
	proposed cyanide treatment methods do not list any acceptable treatment levels. DTSC is encouraged to clarify applicability of the proposed rule.		scope of this rulemaking. The acceptable treatment levels are based on the final disposition of the waste. If the waste is to be discharged to the POTW, then treating to the permitted effluent limits is appropriate. However, the final disposition may be something else and may need to comply with other local, state or federal requirements.
RINSING OF NON-EMPTY DRUMS			
W&W	F-7	Commenter requests that the rulemaking specifically address the rinsing of drums formerly containing cyanide material.	§67450.11(d)(3) §67450.11(d)(2) DTSC has revised the proposed language to include aqueous waste generated by the onsite recycling of containers (drums). DTSC will clarify this issue in the Final Statement of Reasons. Existing laws and regulations already address drum rinsing or recycling: 1) Health and Safety Code §25143.2 subdiv. (c)(2)(A) provides an exemption that can be applied for the recycling product drums if reused onsite. 2) §66261.7 defines when a container (drum) has been emptied and is not regulated as a hazardous waste. 3) §67450.11 subsec. (a)(11) lists rinsing as an eligible PBR treatment for containers of less than 110 gallons. This PBR authorization can be used to achieve the California definition of "empty container" for offsite management.
ELECTROWINNING			
MFASC	D-11	Commenter concurs with proposal to allow electrowinning for the treatment of cyanide process solutions.	§67450.11(d)(6) The commenter does not suggest a change.
MFASC	D-19	Commenter requests that the language be clarified to not exclude electrowinning from rinse tanks.	§67450.11(d)(6) The proposed rule only allows electrowinning of process solutions to recover metals. Electrowinning is currently allowed as a PBR treatment for aqueous waste under §67450.11 subsec. (a)(2)(l) if the aqueous waste is not reactive or is not extremely hazardous.
IPC	E-9	Commenter recommends that a second sentence be added to clarify that, "Process solutions that are treated by electrowinning as part of the process are not covered by this listing."	§67450.11(d)(6) Commenter is asking for a change in the public notice language which has no affect on regulatory language. Process solutions are not hazardous waste unless the generator has determined the process solutions are spent and need to be recycled, disposed, or relinquished.
IPC	E-10	Commenter recommends that DTSC update its	§67450.11(d)(6) Commenter is recommending a change in the public notice language which has no affect on

Commenter Comment #	Comment	California Code of Regulations	Response
EXPANDING OR CLARIFYING ELIGIBLE TECHNOLOGIES			
		electrowinning process description to reflect products that are commercially available.	regulatory language. Furthermore, it is not DTSC policy to specify a patented technology in regulatory language.
IPC	E-11	Commenter recommends that DTSC examine the Bewt Chemelec electrowinning technology and reconsider the need for the proposed regulations.	<p>§67450.11(d)(6)</p> <p>DTSC is only proposing electrowinning to allow the recovery of metal in spent process solutions that contain cyanide. DTSC is not revising the proposed rule to include electrowinning for the destruction of cyanide because it is not a proven technology under all conditions.</p> <p>The commenter has the option of applying under Health and Safety Code §25200.1.5 for a technology certification of this specific process. Once certified, this technology is eligible for authorization pursuant to PBR, conditional authorization, or conditional exemption.</p>
MSI	O-3	Commenter states that electrowinning will allow metal finishers to recover precious metal that are being sent offsite at \$7.00 - \$10.00 per gallon to recycle the silver or gold.	<p>§67450.11(d)(6)</p> <p>Commenter is not suggesting a change to the proposed rule.</p>
IPC	V-4	Commenter urges DTSC to clearly include electrowinning in §67450.11(d)(3) as an eligible treatment for aqueous cyanide-containing waste.	<p>§67450.11(d)(3)</p> <p>See the response to Comment D-19 for additional details. DTSC is only proposing electrowinning to allow the recovery of metal in spent process solutions. Electrowinning is not an effective treatment for dilute aqueous cyanide-containing solutions. Alkaline chlorination is a much more efficient method.</p> <p>Electrowinning of dilute aqueous solutions is currently eligible for PBR authorization if the aqueous solution is not reactive or extremely hazardous.</p>
IPC	V-5	Commenter recommends that electrowinning include cyanide containing rinse waters, not just spent process solutions and suggests that a qualifier be added at the end of paragraph (d)(6), "or cyanide-containing rinse waters."	<p>§67450.11(d)(6)</p> <p>See response to Comments D-19 and V-4.</p>
BLEEDING			
CUPA	B-3	Commenter does not agree with the concept of bleeding concentrated process	<p>§67450.11(d)(7)</p> <p>DTSC has revised the regulatory text to include a requirement that a written method for ensuring compliance with the maximum concentration of</p>

Commenter Comment #	Comment	California Code of Regulations	Response	
EXPANDING OR CLARIFYING ELIGIBLE TECHNOLOGIES				
	<p>solutions into the waste water systems due to a) mixing a federally listed waste as a treatment process can not be adequately monitored or controlled; b) allowing bleeding would validate a process that is currently occurring illegally; and c) treatment of concentrated process solutions should be done with specifically controlled and buffered treatment solutions.</p>		<p>5,000 ppm total cyanide be documented in the required waste analysis plan. The waste analysis plan should document how bleeding will be controlled and monitored. The waste analysis plan must contain all the information which must be known to treat the waste in accordance with hazardous waste requirements, such as details of the waste characterization, analytical methods, frequency, sampling methods, and treatment parameters.</p> <p>DTSC has revised the regulatory text to clarify that the 5,000 ppm limit is total cyanide instead of amenable cyanide.</p> <p>DTSC agrees that this authorization would legalize a process that is currently not allowed. Any enforcement is based on the law and regulations in place at the time of an alleged violation. This proposed rule should not impact any ongoing enforcement cases.</p> <p>DTSC is not revising the proposed rule to include the treatment of concentrated process solutions (400,000 to 500,000 ppm) with controlled and buffered treatment solutions. DTSC is limiting the types of waste streams that are allowed to be used for diluting the process solution. Only aqueous waste generated from rinsing work pieces, fixturing, containers, pumps, hoses, and other equipment contaminated with process solutions are allowed because these waste streams would contain low concentrations of the same or similar process solutions. DTSC has determined that it is safer to bleed these concentrated process solutions into aqueous waste, diluting them to 5,000 ppm of total cyanide, before the resulting aqueous waste is treated to destroy the cyanide.</p>	
MFASC	D-20	<p>Commenter strongly supports the slow addition of spent process solutions for subsequent cyanide destruction.</p>	§67450.11(d)(7)	<p>Commenter is not suggesting a change to the proposed rule.</p>
MFASC	D-21	<p>Commenter generally supports the proposal but requests that language be changed to address the solid residuals are not amenable for offsite recycling for economic</p>	§67450.11(d)(7)(B)	<p>Wastewater sludge from metal finishing operations contains up to 40% recoverable concentrations of metals. The United States Environmental Protection Agency (US EPA) estimates that only 19% if this sludge was reclaimed or recovered in 2003. DTSC is requiring offsite recycling to reduce the land</p>

Commenter Comment #	Comment	California Code of Regulations	Response
EXPANDING OR CLARIFYING ELIGIBLE TECHNOLOGIES			
	reasons.		<p>disposal of the metal sludge and decrease the need to mine ore.</p> <p>However, DTSC has revised the language to allow not only facilities that recover the metal but also facilities that make the sludge more amenable (partial reclamation) for other facilities that recover the metal. There may also be additional economic reasons or technological reasons for not complying with offsite recycling. DTSC has revised the language to include a justification statement that documents the circumstances that makes recycling this sludge impracticable.</p> <p>Note: This allowed treatment is not mandatory and the cost of offsite recycling needs to be evaluated by a business that is contemplating this alternative for onsite treatment of aqueous waste with cyanides.</p>
MFASC	D-22	Commenter supports the requirement to obtain written approval from the appropriate POTW.	§67450.11(d)(7) Commenter is not suggesting a change to the proposed rule.
MFASC	D-23	Commenter request that DTSC allow for a petition process to increase the concentration limit on dilution of a bleed stream when it can be shown that the technology employed can handle a higher level.	§67450.11(d)(7) DTSC did not add a petition process to the proposed rule allowing operators to request authorization for the treatment of aqueous waste above 5,000 ppm of cyanide. A petition process would have required DTSC or the CUPAs to evaluate these requests individually, thus generating a new work load. PBR Is meant for technologies that are well established and recognized. The technologies included in the proposed rule have been evaluated. If there is an innovative technology out there, generators can have the technology certified and be eligible for PBR.
MFASC	D-24	Commenter requests that DTSC clarify the type of cyanide to be limited to 5,000 ppm “free”, “amenable to chlorination”, or “weak acid dissociable” because these type of cyanide pose the greatest risk. The type of test to be used to measure the 5,000 ppm should also be clarified.	§67450.11(d)(7) DTSC has revised the language to clarify that the limit is 5,000 ppm of total cyanides. Any of the applicable published methods in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846 would be appropriate as specified under Cal Code Regs., tit. 22, ch. 11.
SCL	N-15	Commenter requests the	§67450.11(d)(7) See response to Comment D-24.

Commenter Comment #	Comment	California Code of Regulations	Response
EXPANDING OR CLARIFYING ELIGIBLE TECHNOLOGIES			
	language be revised to specify which analytical procedure is to be used for determining the 5,000 ppm concentration.	(A)	
MFASC	D-25 Commenter supports that businesses retain records demonstrating that they have sent their residuals solids for recycling.	§67450.11(d)(7)	Commenter is not suggesting a change to the proposed rule.
W&W	F-8 Commenter requests that DTSC allow batch treatment, in addition to metering, of higher concentration aqueous cyanide solutions with lower concentration aqueous waste.	§67450.11(d)(7)	Proposed regulatory language does not exclude batch treatment. The regulatory language specifies the “process solutions may be treated by slow addition”. The term metering is not used in the regulatory language.
KAI	S-3 Commenter requests that the proposed regulations authorize the metered dilution of process solutions to include batch treatment.	§67450.11(d)(7)	See response to Comment F-8 for details.
MFASC	W-1 Many cyanide residuals do not contain metals at intrinsic levels for legitimate recycling. Commenter proposes the following revised language to be inserted into the proposed rule to address when residual solids should be recycled, “managed per Health and Safety Code section 25202.9(b) and in accordance with section 66262.45(c), and where residuals contain intrinsic metal values, they shall be”.	§67450.11(d)(7)	<p>See the response to Comment D-21 for details.</p> <p>Health and Safety Code section 25202.9(b) requires an annual certification to ensure treatment, storage or disposal methods minimize present and future threats are included as a permit condition. PBR authorization does not require DTSC to issue a permit, so this law would not apply.</p> <p>Similarly section 66262.45(c) requires a generator provide a certification that ensures a proposed treatment is that practicable method currently available that minimizes present and future threats.</p> <p>Although recycling best meets both of these requirements, a large percentage of residual solids are instead landfilled.</p> <p>DTSC’s revised language will require a justification statement that specifically addresses the recycling residual solids only if a generator chooses to treat process solutions.</p>

BEST MANAGEMENT PRACTICES

Master Response 5: Generators of aqueous waste containing cyanide may treat this waste on-site in tanks, or containers, without a standardized permit, if the generator implements specific pollution prevention practices also referred to as best management practices. These practices include drag out control, counter current rinsing, chemical substitution analysis, and training.

Commenter Comment #	Comment	California Code of Regulations	Response
BEST MANAGEMENT PRACTICES			
CDMS	C-2	The requirement of installation of countercurrent rinsing equipment and drain board is excessive and should be removed. SB 14 (Health and Safety Code §25244.12, et seq.) and federal wastewater discharge standards (40 Code of Federal Regulations, part 433) already address these requirements.	§67450.11(d)(4) (A) DTSC has revised the proposed text to allow holding racks and/or drain boards, and is requiring counter current rinsing only when there is more than one tank used for rinsing. This should give operators additional leeway. Health and Safety Code §25244.12 and federal wastewater discharge standards are both performance standards. The requirements in the proposed text are not duplicative. DTSC does not consider these measures excessive; they are already commonly used by the metal finishing industry. Although these measures are prescriptive, the proposed regulations are not mandated. Operators need to evaluate the economics of onsite PBR treatment (including these requirements) and compare these to the cost of offsite treatment or disposal.
MFASC	D-14	Commenter request that the regulatory language provide a leeway for the use of holding rack and drain boards where such practices can not be employed due to process requirements by adding the phrase, “wherever technologically and economically feasible.”	§67450.11(d)(4) (A) DTSC has modified the proposed text, word “and” has been changed the to “and/or” which allows more flexibility in its implementation. The commenter’s proposed phrase is too vague. See response to Comment C-2 for more details.
MFASC	D-15	The Commenter requests that countercurrent rinsing not be a requirement for PBR treatment. Specific concerns include a) this practice is self regulating, b) three countercurrent rinses are generally most effective and c) leeway should be provided in the regulatory language by adding the phrase, “wherever technologically and economically feasible.”	§67450.11(d)(4) (B) DTSC is not eliminating the requirement for counter current rinsing, but has modified the text to include a qualifier, “when multiple sequential rinse tanks are used.” If a single tank is used, counter current rinsing will not be required. The comment that the practice is self-regulating does not suggest a change to the proposed rule. The statement about three rinses being “generally most effective” is found in the ISOR is true, but DTSC concedes that it may not be the most optimal rinsing configuration in all

Commenter Comment #	Comment	California Code of Regulations	Response
			instances. The suggested phrase, “wherever technologically and economically feasible.” is too vague. DTSC will not include this language in the proposed rule.
MFASC	D-16	Commenter supports the requirement to review the use of cyanide processes to determine if an alternative is available.	§67450.11(d)(4) Commenter does not suggest a change to the proposed rule.
MFASC	D-17	Commenter generally supports the training requirement but would like the language to be changed to clarify that the employer is the responsible party that is to identify the persons requiring each type of training.	§67450.11(d)(4) DTSC has clarified the language to include employees and their supervisors that handle either the process solutions or the waste in order to limit the training to employees that handle cyanide materials. DTSC feels that all employees that handle process solutions and their supervisors should be trained in pollution prevention measures.

RECYCLING ISSUES

Master Response 6: Commenters requested that the proposed rule should allow the onsite reuse of waste containing cyanide. Health and Safety Code section 25143.2 subsec. (c)(2)(A) allows any recyclable material to be recycled at a facility without a permit if the material is recycled and used at the same facility at which the material was generated. This conditional exclusion from permitting can be used:

- *to rinse product containers if the drums are then reused at the same facility for the storage of similar cyanide materials;*
- *to rinse anode bags prior to onsite reuse; and*
- *to use ion exchange or reverse osmosis for the recycling of water.*

This proposed rule does not disallow any permitting exemptions or waste exclusions that can be asserted by an operator.

Commenter Comment #	Comment	California Code of Regulations	Response
RECYCLING ISSUES			
KAI	R-2	Commenter requests that the proposed regulations should be broader to allow increased onsite reuse of cyanide-containing aqueous waste and allow for more treatment methods.	§67450.11(d) Onsite recycling is conditionally excluded from permitting requirements. Including specific onsite reuse of hazardous waste is redundant. However, DTSC has revised the language to include aqueous waste generated from recycling activities.

Commenter Comment #	Comment	California Code of Regulations	Response
			See Master Response 6 for more details.
IPC	E-1	Commenter contends that the proposed rulemaking appears to inappropriately and unnecessarily regulate gold plating rinsewaters.	§67450.11(d) The proposed rule does not mandate additional regulatory provisions for gold platers, but provides a lower authorization tier for the onsite treatment of aqueous waste containing cyanide. Commenter is not suggesting a change to the proposed rule.
IPC	E-2	Commenter describes gold recovery techniques as being part of the gold plating process and meeting the exclusion of California Code of Regulations §66261.4 subsec. (a)(5)(A).	§67450.11(d) The proposed rule does not disallow any existing waste exclusions. Commenter is not suggesting a change to the proposed rule.
W&W	F-1	Commenter asserts that “the regulations do not justify barring the reuse of usable CN containing solutions” and suggests that the regulations be refocused to clearly allow use of cyanide containing solutions for waste reduction using a variety of techniques.	§67450.11(d) The focus of the proposed rule is to allow the onsite treatment of aqueous waste containing cyanide under a lower permit tier. The proposed rule does not disallow any existing waste exclusions or permitting exemptions that allow the reuse of usable cyanide (CN) containing solutions.
W&W	F-5	Commenter requests that DTSC clarify in a guidance document that reuse at the facility are either already approved or exempt. For example, used solutions can be reused to replenish and/or fortify other existing stripping and plating baths and solutions.	§67450.11(d) Commenter is not suggesting a change to the proposed rule. DTSC will provide additional clarification in Fact Sheets. The focus of the proposed rule is to allow the treatment of aqueous waste under PBR; not to clarify existing recycling provisions.
KAI	G-3	Commenter states that the reuse of used cyanide pre-cleaning and cleaning solutions without treatment is an economical viable alternative to purchasing virgin solutions, as is allowed under federal law. Commenter suggests that the proposed PBR regulations include a statement that such reuse is approved by the state without the need for any further authorization.	§67450.11(d) Materials are not a waste when these secondary materials are reclaimed and returned to the original process in which these materials were generated as specified in §66261.4 subsec. (a)(5). This California exclusion is identical to the federal exclusion found in 40 Code of Federal Regulations §261.4(a)(8). DTSC will not revise the language to address the onsite reuse of a spent solution without additional treatment. If there is an appropriate reuse, it is considered recycling under existing laws and regulations. However, under site specific situations, it may be disallowed if it is dilution, sham recycling, or fails to meet the conditions of the exclusion.

Committer Comment #		Comment	California Code of Regulations	Response
KAI	S-1	Committer requests that the use of spent cyanide solutions be allowed to recharge process solutions. The regulations should clarify the continued use of spent solutions.	§67450.11(d)	See response to Comment G-3 and F-5 for details.
W&W	F-6	Committer states that the rulemaking should specifically authorize or exempt the reuse of dragout in the originating process as an intermediate process stream.	§67450.11(d)	<p>Page 21 of the Initial Statement of Reasons explains that process solutions may be rinsed into process tanks for use directly in the facility's industrial process (such as electroplating and stripping) without obtaining authorization as allowed by the State's statutes for recycling exemptions, Health and Safety Code, §25143.2. This recycling exemption also applies to the reuse of dragout in the originating process.</p> <p>DTSC will provide additional clarification in Fact Sheets to clarify existing recycling provisions.</p>
KAI	G-4	Committer requests the reuse of drag out without treatment be allowed under this proposed PBR regulation.	§67450.11(d)	See response to Comment G-3 and F-6 for details.
KAI	S-2	Committer requests that the use of cyanide dragout solutions be allowed to be reused for the original purposes or for another purpose, such as stripping.	§67450.11(d)(2)	<p>Secondary materials that are reclaimed and returned to the original process in which they were generated meet the conditions of the exclusion under §66261.4 subsec. (a)(5). However, when these same materials are used for another purpose, a site specific determination needs to be made whether they qualify for another waste exclusion or recycling exemption.</p> <p>See response to Comment G-3 and F-6 for additional details.</p>
IPC	E-13	<p>Committer believes the proposed regulations are costly and unnecessary for the printed circuit board industry given the existing cyanide treatment requirements under the Clean Water Act pretreatment standards.</p> <p>Committer requests that DTSC clearly exclude the printed circuit board gold plating process rinse tanks that contain cyanide from the</p>	§67450.11(d)(2)	<p>The Clean Water Act does not authorize the treatment of hazardous waste, but sets discharge limits based for specific constituents based on industrial activities. See master response #4 for additional details.</p> <p>Process rinses are not subject to hazardous waste law until they are spent and can no longer be used for their intended purpose and are then discarded. A discarded material is any material that is relinquished, recycled, or inherently waste-like. Once the rinse water becomes a hazardous waste, a printed circuit board</p>

Commenter Comment #	Comment	California Code of Regulations	Response
	proposed regulations.		manufacturer may choose to take advantage of this lower permitting tier. However, an exclusion from the proposed regulations would disallow eligibility in this lower permitting tier.

ECONOMIC IMPACTS

Master Response 7: Currently the treatment of aqueous waste containing cyanide is not allowed under the PBR tier and requires a standardized permit for the onsite treatment of this hazardous waste or requires offsite shipment of the waste to a permitted hazardous waste facility.

This proposed rule is regulatory relief which will allow aqueous waste containing cyanide to be treated under a lower regulatory permit tier thereby, lowering the overall impact to businesses, state, county, and local agencies. The baseline for the economic analysis is the existing requirements for standardized permit for onsite treatment and the resulting cost avoidance under PBR.

If a business is currently not treating onsite, there may be new costs associated with bringing existing onsite equipment up to hazardous waste requirements or standards. This proposed rule is not mandated, but it does offer businesses another option for the treatment of aqueous waste containing cyanide. It would be up to an individual business to evaluate and compare the cost of offsite treatment versus the cost of operating under PBR for onsite treatment, if this option becomes available.

Commenter Comment #	Comment	California Code of Regulations	Response	
ECONOMIC IMPACTS				
MFASC	D-2	Commenter requests that DTSC quantify and assess the economic impact of the final rule.	§67450.11(d)	The final rule will be a relief from more stringent requirements and does not result in greater economic impact to California businesses.
MFASC	D-3	Commenter request additional waste streams to reduce the economic impact on businesses.	§67450.11(d)	The current baseline is the cost of a standardized permit for the onsite treatment of aqueous waste containing cyanide which has a greater cost to facilities than operating under PBR. Not adding additional waste streams results in less economic relief, not greater cost.
IPC	E-12	Commenter disagrees with DTSC's	§67450.11(d)	DTSC is not proposing to regulate process

Commenter Comment #		Comment	California Code of Regulations	Response
		conclusion on the fiscal impacts of the regulations on “Cost Impacts on Representative Private Persons or Businesses”. Commenter contends that there is a potential cost to printed circuit board manufacturers of hundreds of thousand of dollars if DTSC regulates process tanks for the cost of the required tank engineering certifications.		tanks and is not proposing to require tank certifications for process tanks. However, if a printed circuit board manufacturer is planning to use a process tank for the treatment of hazardous waste, then an engineering certification is required for the tank when it is used as a hazardous waste treatment tank. This requirement for tank engineering certifications is an existing regulation in California Code of Regulations, title 22, division 4.5, chapters 14 and 15 for all hazardous waste storage and treatment tanks and is outside of the scope of this proposed rule.
KAI	G-2	Commenter states that the apparent omission of some processes from the proposed PBR rulemaking will create inefficiencies, increase costs to businesses, and go against the State’s pollution prevention and waste reduction goals.	§67450.11(d)	See Master Response 7 for details.

EXEMPTION REQUESTS

Master Response 8: Granting an exemption for wastewater treatment units to make California statute and regulations similar to the federal permitting exclusion is outside of the scope of the proposed rule. This requested exemption would conflict with Health and Safety Code section 25201 which requires DTSC authorization to treat hazardous waste.

Commenter Comment #		Comment	California Code of Regulations	Response
EXEMPTION REQUESTS				
MFASC	D-1	Commenter states that the federal exemption for wastewater treatment units conflicts with Health and Safety Code §25201.	§67450.11(d)	Commenter is not suggesting a change to the proposed rule.
W&W	F-2	Commenter suggests that the proposed regulations conform to the federal program and recognize the federal exemption.	§67450.11(d)	The comment is outside of the scope of this rulemaking.
W&W	Q-1	Commenter believes the	§67450.11(d)	See Master Response 8 for details.

Commenter Comment #	Comment	California Code of Regulations	Response
	regulations are a good start, but DTSC should consider adopting the federal exclusion for onsite treatment and recycling. The federal exemption had proven to sufficiently protective of human health and the environment.		
KAI	S-4 Commenter requests that DTSC adopt the federal exclusion for onsite treatment of spent cyanide solutions.	§67450.11(d)	See Master Response 8 for details.

GENERAL COMMENTS, DUPLICATES, OR NO CHANGE REQUESTED

Master Response 9: DTSC appreciates the support and the effort to review and comment on this proposed rule. Commenter is not suggesting a change to the proposed rule or needs to refer to a response to another comment.

Commenter Comment #	Comment	California Code of Regulations	Response
GENERAL COMMENTS, DUPLICATES, OR NO CHANGE REQUESTED			
BELMC	A-1 The commenter supports the proposed regulations as they are currently written.	§67450.11(d)	Commenter is not suggesting a change to the proposed rule.
KAI	G-5 Commenter requests that proposed regulations also authorize batch treatment of concentrated aqueous cyanide solutions, in addition to the metering of such. However, if the State chooses to regulate batch treatment, commenter requests that it conform to the federal program or be allowed under conditional authorization, a lower permit tier.		The proposed regulations do not use the term metering or batch when describing the slow addition of concentrated solutions into other aqueous waste. See response to comment F-8 for additional details. Conforming to the federal exemption is outside of this scope of the proposed rule. See Master Response 8 for more details. The treatment of waste which is reactive or extremely hazardous is ineligible for conditional authorization pursuant to Health and Safety Code §25200.3 subdiv. (d)(5). Process solutions are both reactive and extremely hazardous.
W&W	F-9 Commenter states that waste reduction steps reduce the risk to public health by minimizing	§67450.11(d)	Commenter is not suggesting a change to the proposed rule.

Commenter Comment #	Comment	California Code of Regulations	Response
GENERAL COMMENTS, DUPLICATES, OR NO CHANGE REQUESTED			
	the volume of waste shipped offsite.		
MFASC	J-1 Commenter supports rulemaking. Commenter commends DTSC for moving forward with the regulations to bring treatment of aqueous waste containing cyanide into the tiered permitting structure.	§67450.11(d)	Commenter is not suggesting a change to the proposed rule.
MFASC	K-1 Commenter generally supports rulemaking and supports the written comments submitted by MFASC.	§67450.11(d)	See responses to Comments D-1 through D-25 which were submitted by the Metal Finishing Association of Southern California.
VCPI	L-1 Commenter stated that there have been no incidents involving cyanide under the federal exemption for onsite treatment of cyanide containing hazardous waste. No other states have regulations for the onsite treatment of aqueous cyanide waste. Imposing cyanide regulations on metal finishers in California gives out of state finishers an unfair competitive advantage.	§67450.11(d)	Commenter is not suggesting a change to the proposed rule.
CC	M-1 Commenter commends DTSC for the rulemaking proposal and states that transportation risks will be lowered when onsite treatment is allowed.	§67450.11(d)	Commenter is not suggesting a change to the proposed rule.
SCL	N-1 Commenter requests that the proposed rule be revised to allow companies that are non-zero discharge but have a program in effect to eventually get to zero discharge to be included.	§67450.11(d)(2)(B)	DTSC has revised the language to provide leeway for facilities employing ion exchange or reverse osmosis if their discharges derived from the treatment of cyanide-containing aqueous waste have been eliminated. See response to Comments D-4.
SCL	N-2 Commenter requests that regenerate (aqueous waste) generated by reverse osmosis in facilities that have zero discharge and use reverse osmosis for recycling water be added to the eligible waste streams.	§67450.11(d)(2)(B)	DTSC has revised the language to allow the treatment of aqueous waste generated by reverse osmosis to encourage water conservation. See Comment D-9.
SCL	N-3 Commenter requests that treatment of filter service waste be allowed to be treated.	§67450.11(d)(2)	See response to Comments C-1 and D-5 for details. The treatment of solids is outside of the scope of this proposed rule. If the filters are part of

Commenter Comment #	Comment	California Code of Regulations	Response
GENERAL COMMENTS, DUPLICATES, OR NO CHANGE REQUESTED			
			the transfer equipment and rinsing these filters qualifies as recycling, then the resulting rinsewater can be treated under this proposed rule.
SCL	N-4	Commenter requests that waste generated from the servicing of anode bags be allowed to be treated.	§67450.11(d)(2) (B) See response to Comment D-6 for details. DTSC has revised the language to add the rinse water generated when recycling anode bags to the list of eligible wastestreams allowed under the proposed rule.
SCL	N-5	Commenter requests that waste generated by spills under 5 gallons are allowed to be treated.	§67450.11(d)(2) See response to Comment D-7 for additional details. Spill clean ups will not be added to the proposed rule as this will encourage bad housekeeping practices.
SCL	N-6	Commenter requests that waste generated by a laboratory used at the facility for process quality control be allowed to be treated.	§67450.11(d)(2) (E) See response to Comment D-8 for additional details. DTSC has revised the language to allow rinse water from onsite laboratories to be treated under the proposed rule.
SCL	N-7	Commenter requests that DTSC allow the use of thermal oxidation systems.	§67450.11(d)(3) See response to Comment D-12 for additional details. Thermal treatment is prohibited under the federal permitting exclusion for onsite treatment and is outside of the scope of this rulemaking.
SCL	N-8	Commenter requests the addition of “whenever this technology is technologically and economically feasible” for the use of drain boards and holding racks.	§67450.11(d)(4) (A) See response to Comments C-2 and D-14 for additional information. DTSC revised the language to provide leeway to make this a more practicable requirement.
SCL	N-9	Commenter requests the addition of “whenever this technology is technologically and economically feasible” for the countercurrent rinsing requirement.	§67450.11(d)(4) (B)1 See response to Comments C-2 and D-14 for additional information. DTSC is not eliminating the requirement for counter current rinsing, but has modified the language to include a qualifier, “when multiple sequential rinse tanks are used.”
SCL	N-10	Commenter supports this portion of the regulation.	§67450.11(d)(4) (B)2 Commenter is not suggesting a change to the proposed rule.
SCL	N-11	Commenter requests clarification that the employer is the one responsible for identification of the personnel and level of training.	§67450.11(d)(4) (B)3 DTSC has clarified the language to include employees and their supervisors that handle either the process solutions or the waste. See Comment D-17 for more details.
SCL	N-12	Commenter requests that	§67450.11(d)(5) Definition is already provided in §67450.11(b).

Commenter Comment #	Comment	California Code of Regulations	Response
GENERAL COMMENTS, DUPLICATES, OR NO CHANGE REQUESTED			
		DTSC define aqueous waste.	See Comment D-18 for more details.
SCL	N-13	Commenter requests the language to be revised to include electrowinning rinse water.	§67450.11(d)(6) See Comment D-19 for details. Electrowinning is currently allowed as a PBR treatment for rinse waters under Cal. Code Regs., tit. 22, §67450.11(a)(2)(l).
SCL	N-14	Commenter strongly supports this provision.	§67450.11(d)(7) Commenter is not suggesting a change to the proposed rule.
SCL	N-16	Recycling facilities may not always be available. Commenter requests the language be revised to include, "to be used wherever economically, technologically and facility-wise feasible."	§67450.11(d)(7)(B) See Comment D-21 for details. DTSC has revised the language to allow metal recovery facilities and facilities that make the sludge more amenable (partial reclamation) for other facilities that recover the metal. There may also be additional economic reasons or technological reasons for not complying with offsite recycling. DTSC has revised the language to include a justification statement that documents the circumstances that make recycling this sludge impracticable.
SCL	N-17	Commenter supports this provision.	§67450.11(d)(1)(C)1 Commenter is not suggesting a change to the proposed rule.
SCL	N-18	Commenter supports this provision.	§67450.11(d)(1)(C)3 Commenter is not suggesting a change to the proposed rule.
SCL	N-19	Commenter commends the agency for the approach in providing for a safe environment.	§67450.11(d) Commenter is not suggesting a change to the proposed rule.
MSI	O-1	Commenter thanks DTSC for going forward with this proposed regulation. Commenter states that currently metal finishers are not allowed to recycle silver or gold without a permit.	§67450.11(d) Commenter is not suggesting a change to the proposed rule.
MSI	P-1	Commenter supports Frank Altmayer's comments and states that OSHA data shows no problems with the onsite treatment of cyanide-containing aqueous solutions.	§67450.11(d) See responses to Comments D-1 through D-25 which were submitted by Frank Altmayer on behalf of the Metal Finishing Association of Southern California. Commenter is not suggesting additional changes to the proposed rule.
MSI	P-2	Commenter states that Los Angeles Sanitation District (LASD) is aware of the metal finishing industry treating dilute and concentrated waste cyanide solutions and LASD supports comments submitted	§67450.11(d) Commenter is not suggesting a change to the proposed rule.

Commenter Comment #	Comment	California Code of Regulations	Response
GENERAL COMMENTS, DUPLICATES, OR NO CHANGE REQUESTED			
		on behalf of MFASC.	
W&W	Q-3	Commenter requests that consent orders issued in this new interim period should reflect the scope of the proposed regulations. The broader list of eligible waste streams and technologies being proposed under this rulemaking should be incorporated into consent orders.	§67450.11(d) Commenter is not suggesting a change to the proposed rule. All consent orders issued metal finishers that treat aqueous waste containing cyanide will become void 30 days after the proposed rule takes effect. Modifying these consent orders is outside of the scope of this rulemaking.
W&W	Q-4	Commenter asks, "What approach will the department take for the operators who are currently operating under existing cyanide consent orders but who would like their waste streams and treatment technologies to more closely mirror the proposed regulations?"	§67450.11(d) DTSC has no plans to initiate modification of any of the existing consent orders. See response to Comment P-3 for more details.
IPC	V-3	Commenter urges DTSC to explicitly state the criteria for treatment concentration for the proposed PBR rule, in line with POTW discharge limits.	§67450.11(d)(1) Outside of the scope of this rulemaking. This is a hazardous waste determination question. See Master Response 1 and Comment E-4 for more details.
IPC	V-12	Commenter encourages DTSC to include a statement that any aqueous cyanide-containing waste be excluded from the regulations.	§67450.11(d)(1) This issue is outside of the scope of this proposed rule. See response to Comment V-2 for details.
IPC	V-13	Commenter states that DTSC failed to define the scope of the proposed regulation, neglected to evaluate the economic impact, clarify the applicability, and exclude PCB gold plating process rinse tanks.	§67450.11(d) See responses to Comments V1 through V12 and E-1 through E-13 for details.
MFASC	W-2	Commenter requests that DTSC add filters to the list of equipment used to transfer cyanide solutions	§67450.11(d)(2)(C) The treatment of cyanide-containing solids is outside of the scope of this proposed rule. See the response to Comments C-1 and D-5 for more information.
MFASC	W-3	Commenter requests that DTSC add Thermal oxidation as an approved treatment.	§67450.11(d)(3) The thermal treatment of waste is outside of the scope of this proposed rule. See the response to Comment D-12 for more information.
CR	X-1	How does DTSC propose the business monitor the bleeding	§67450.11(d)(7) The comment is outside of the scope of the 15 day notice. Furthermore, the Commenter is

Commenter Comment #	Comment	California Code of Regulations	Response
GENERAL COMMENTS, DUPLICATES, OR NO CHANGE REQUESTED			
		of the two solutions?	<p>not suggesting a change to the proposed rule.</p> <p>See the response to Comment B-3 for more information. The regulations are not prescriptive and do not specify the methods for monitoring. The generator would have to document the procedure in the waste analysis plan to meet the requirements in the proposed rule.</p>
CR	X-2	If testing of the combined solution is DTSC's proposal, what is an acceptable real time testing methods that will have the accuracy desired?	<p>§67450.11(d)(7) (A)</p> <p>The comment is outside of the scope of the 15 day notice. Furthermore, the Commenter is not suggesting a change to the proposed rule.</p> <p>It is the generator who is responsible for characterizing a hazardous waste. The variability of the waste generation will determine the frequency of the sampling required to fully characterize range of cyanide concentration generated. The greater the variability in the waste composition will require greater number of analytical sampling.</p> <p>If the same volume of waste is generated in the same manner with the same concentration of each of the underlying constituents, then less sampling frequency is required. If the method of waste generation and the chemical compositions varies with each individual batch, then sampling of each batch will be required to ensure compliance with this requirement.</p> <p>The cost of sampling may outweigh the cost savings of the onsite treatment of process solutions.</p>
CR	X-3	What documentation would the CUPA or DTSC need to see to confirm the new mixture was maintained below the 5,000 ppm limit?	<p>§67450.11(d)(7) (E)2</p> <p>The comment is outside of the scope of the 15 day notice. Furthermore, the Commenter is not suggesting a change to the proposed rule.</p> <p>Information on this treatment procedure, sampling methodology, frequency, analytical methods, and all other details needed to document this process should be included in the waste analysis plan as specified in the proposed rule.</p>
CR	X-4	Can the plating shops continue to treat the hazardous waste bath solution for cyanide provided it meets the conditions established in the next step, i.e.	<p>§67450.11(d)(6)</p> <p>The comment is outside of the scope of the 15 day notice. Furthermore, the Commenter is not suggesting a change to the proposed rule.</p> <p>A generator could electrowin a plating solution</p>

Commenter Comment #	Comment	California Code of Regulations	Response
GENERAL COMMENTS, DUPLICATES, OR NO CHANGE REQUESTED			
	the destruction or removal of cyanide?		and then dilute it provided the generator met the conditions of the regulations.
CR	X-5 Will DTSC allow for the CUPA's to also make the request for an annual report of the cyanide treatment facilities they have under permit to allow for better monitoring of the operation as their inspection frequency by the regulation is one in a 3 year period?	§67450.3(c)(10)	<p>The comment is outside of the scope of the 15 day notice. Furthermore, the Commenter is not suggesting a change to the proposed rule.</p> <p>The annual report requirement is outside of the scope of this proposed rule. This proposed rulemaking does not alter the annual reporting requirement.</p>
CR	X-6 Now that DTSC is considering the PBR for cyanide waste allowing for ionization exchange filter to treat this waste, another look at what is an acceptable practice currently in use must be evaluated.	§67450.11(d)(2) (B)	<p>The comment is outside of the scope of the 15 day notice. Furthermore, the Commenter is not suggesting a change to the proposed rule.</p> <p>When ion exchange columns are spent, the resulting cyanide-contaminated waste will be more concentrated.</p> <p>There is a concentrated regeneration waste (solute), which will be eligible for treatment under PBR and there is spent resin. DTSC is authorizing the treatment of the concentrated solute to encourage water recycling.</p> <p>If the treatment of the spent resin, the demineralization of the ion exchange column, qualifies for a recycling exemption, no additional authorization is needed. If the treatment of the spent resin does not qualify for a recycling exclusion, a standardized permit will be needed because this treatment is not eligible for the proposed PBR authorization.</p>
CR	X-7 Has any study been conducted to determine what the average concentration of cyanide may be from the regeneration waste (solute)?	§67450.11(d)(2) (B)	<p>The comment is outside of the scope of the 15 day notice. Furthermore, the Commenter is not suggesting a change to the proposed rule.</p> <p>In the Initial Statement of Reasons, it was stated that these resulting wastewaters are relatively concentrated with up to 10,000 ppm of cyanide and more concentrated metals, but are of low volume - typically 200 - 600 gallons.</p>
CR	X-8 Will the regeneration of ion exchange filters containing cyanide be allowed to occur under this PBR regulation without collecting of this waste stream to determine its actual	§67450.11(d)(2) (B)	<p>The comment is outside of the scope of the 15 day notice. Furthermore, the Commenter is not suggesting a change to the proposed rule.</p> <p>Existing treatment activities at zero discharge facilities are part of the water recycling</p>

Commenter Comment #	Comment	California Code of Regulations	Response
GENERAL COMMENTS, DUPLICATES, OR NO CHANGE REQUESTED			
		concentration, and then allow the blending of this waste?	<p>process, and as such, they are exempted from the authorization requirement by Health and Safety Code section 25143.2.</p> <p>The regeneration waste is allowed to be treated under this proposed rule under the treatment activities listed in section 67450.11(d)(3). Blending is not listed under this section.</p>
CR	X-9	Commenter requests that an addition to the proposed regulations expressly prohibit the co-mingling of the regeneration waste stream if a cyanide waste solution is to be treated by ion exchange.	<p>§67450.11(d)(2) (B)</p> <p>The comment is outside of the scope of the 15 day notice.</p> <p>The recycling of the ion exchange filter is exempt from the authorization requirement by Health and Safety Code section 25143.2. and is outside of the scope of this rulemaking.</p>
CR	X-10	Commenter requests that all of the waste from that ion exchange filter be hard plumbed directly into the cyanide destruction/removal treatment to prevent any accidental releases of cyanide containing waste into an acidic solution causing the generation of hydrogen cyanide gas.	<p>§67450.11(d)(2) (B)</p> <p>The comment is outside of the scope of the 15 day notice.</p> <p>The recycling of the ion exchange filter is exempt from the authorization requirement by Health and Safety Code section 25143.2. and is outside of the scope of this rulemaking.</p>
IPC	V-3	Commenter urges DTSC to explicitly state the criteria for treatment concentration for the proposed PBR rule, in line with POTW discharge limits.	<p>§67450.11(d)(1)</p> <p>Outside of the scope of this rulemaking. This is a hazardous waste determination question.</p> <p>See Master Response 1 and Comment E-4 for more details.</p>
IPC	V-12	Commenter encourages DTSC to include a statement that any aqueous cyanide-containing waste be excluded from the regulations.	<p>§67450.11(d)(1)</p> <p>This issue is outside of the scope of this proposed rule.</p> <p>See response to Comment V-2 for details.</p>
IPC	V-13	Commenter states that DTSC failed to define the scope of the proposed regulation, neglected to evaluate the economic impact, clarify the applicability, and exclude PCB gold plating process rinse tanks.	<p>§67450.11(d)</p> <p>See responses to Comments V1 through V12 and E-1 through E-13 for details.</p>
MFASC	W-2	Commenter requests that DTSC add filters to the list of equipment used to transfer cyanide solutions	<p>§67450.11(d)(2) (C)</p> <p>The treatment of cyanide-containing solids is outside of the scope of this proposed rule. See the response to Comment D-5 for more information.</p>
MFASC	W-3	Commenter requests that	<p>§67450.11(d)(3)</p> <p>The thermal treatment of waste is outside of</p>

Commenter Comment #	Comment	California Code of Regulations	Response
GENERAL COMMENTS, DUPLICATES, OR NO CHANGE REQUESTED			
		DTSC add Thermal oxidation as an approved treatment.	the scope of this proposed rule. See the response to Comment D-12 for more information.
CR	X-1	How does DTSC propose the business monitor the bleeding of the two solutions?	<p>§67450.11(d)(7)</p> <p>The comment is outside of the scope of the 15 day notice. Furthermore, the Commenter is not suggesting a change to the proposed rule.</p> <p>See the response to Comment B-3 for more information. The regulations are not prescriptive and do not specify the methods for monitoring. The generator would have to document the procedure in the waste analysis plan to meet the requirements in the proposed rule,</p>

Commenter	#	Subject
Blue Eagle Lode Mining Co	A-1	General Comments, Duplicates, or No Change Requested
California CUPA Forum Board	B-1	Waste Characterization
	B-2	Expanding Eligible Waste Streams
	B-3	Clarifying Eligible Technologies
Chemical Data Management Systems	C-1	Expanding Eligible Waste Streams
	C-2	Best Management Practices
Metal Finishing Association of Southern California, Inc. and Surface Technology Association	D-1	Exemption Requests
	D-2	Economic Impacts
	D-3	Economic Impacts
	D-4	Expanding Eligible Waste Streams
	D-5	Expanding Eligible Waste Streams
	D-6	Expanding Eligible Waste Streams
	D-7	Expanding Eligible Waste Streams
	D-8	Expanding Eligible Waste Streams
	D-9	Expanding Eligible Waste Streams
	D-10	Expanding Eligible Waste Streams
	D-11	Clarifying Eligible Technologies
	D-12	Clarifying Eligible Technologies
	D-13	Clarifying Eligible Technologies
	D-14	Best Management Practices
	D-15	Best Management Practices
	D-16	Best Management Practices
	D-17	Best Management Practices
	D-18	Waste Characterization
	D-19	Clarifying Eligible Technologies
	D-20	Clarifying Eligible Technologies
	D-21	Clarifying Eligible Technologies
	D-22	Clarifying Eligible Technologies
	D-23	Clarifying Eligible Technologies
	D-24	Clarifying Eligible Technologies
	D-25	Clarifying Eligible Technologies
IPC Association Connecting Electronic Industries	E-1	Recycling Issues
	E-2	Recycling Issues
	E-3	Waste Characterization
	E-4	Waste Characterization
	E-5	Expanding Eligible Waste Streams
	E-6	Expanding Eligible Waste Streams
	E-7	Clarifying Eligible Technologies

Commenter	#	Subject
	E-8	Expanding Eligible Waste Streams
	E-9	Clarifying Eligible Technologies
	E-10	Clarifying Eligible Technologies
	E-11	Clarifying Eligible Technologies
	E-12	Economic Impacts
	E-13	Recycling Issues
Wactor & Wick LLP	F-1	Recycling Issues
	F-2	Exemption Requests
	F-3	Applicability
	F-4	Expanding Eligible Waste Streams
	F-5	Recycling Issues
	F-6	Recycling Issues
	F-7	Clarifying Eligible Technologies
	F-7	Expanding Eligible Waste Streams
	F-8	Clarifying Eligible Technologies
	F-9	General Comments, Duplicates, or No Change Requested
Kyocera America, Inc	G-1	Applicability
	G-2	Economic Impacts
	G-3	Recycling Issues
	G-4	Recycling Issues
	G-5	General Comments, Duplicates, or No Change Requested
	G-6	Expanding Eligible Waste Streams
Strandberg Associates	H-1	Clarifying Eligible Technologies
	H-2	Clarifying Eligible Technologies
FormFactor, Inc.	I-1	Clarifying Eligible Technologies
Metal Finishing Association of Southern California, Inc. and Surface Technology Association	J-1	General Comments, Duplicates, or No Change Requested
Metal Finishing Association of Southern California, Inc. and Surface Technology Association	K-1	General Comments, Duplicates, or No Change Requested
Valley Chrome Plating, Inc	L-1	General Comments, Duplicates, or No Change Requested
Chrome Craft	M-1	General Comments, Duplicates, or No Change Requested
Scientific Control Lab	N-1	General Comments, Duplicates, or No Change Requested
	N-2	General Comments, Duplicates, or No Change Requested
	N-3	General Comments, Duplicates, or No Change Requested
	N-4	General Comments, Duplicates, or No Change Requested

Commenter	#	Subject
	N-5	General Comments, Duplicates, or No Change Requested
	N-6	General Comments, Duplicates, or No Change Requested
	N-7	General Comments, Duplicates, or No Change Requested
	N-8	General Comments, Duplicates, or No Change Requested
	N-9	General Comments, Duplicates, or No Change Requested
	N-10	General Comments, Duplicates, or No Change Requested
	N-11	General Comments, Duplicates, or No Change Requested
	N-12	General Comments, Duplicates, or No Change Requested
	N-13	General Comments, Duplicates, or No Change Requested
	N-14	General Comments, Duplicates, or No Change Requested
	N-15	Expanding Eligible Waste Streams
	N-16	General Comments, Duplicates, or No Change Requested
	N-17	General Comments, Duplicates, or No Change Requested
	N-18	General Comments, Duplicates, or No Change Requested
	N-19	General Comments, Duplicates, or No Change Requested
Metal Surfaces, Inc	O-1	General Comments, Duplicates, or No Change Requested
	O-2	Expanding Eligible Waste Streams
	O-3	Clarifying Eligible Technologies
Metal Surfaces, Inc	P-1	General Comments, Duplicates, or No Change Requested
	P-2	General Comments, Duplicates, or No Change Requested
Wactor & Wick LLP	Q-1	Exemption Requests
	Q-2	Applicability
	Q-3	General Comments, Duplicates, or No Change Requested
	Q-4	General Comments, Duplicates, or No Change Requested
Kyocera America, Inc	R-1	Clarifying Eligible Technologies
	R-2	Recycling Issues
Kyocera America, Inc	S-1	Recycling Issues
	S-2	Recycling Issues
	S-3	Clarifying Eligible Technologies
	S-4	Exemption Requests
	S-5	Expanding Eligible Waste Streams

Commenter	#	Subject
Stratagene	T-1	Expanding Eligible Waste Streams
	T-2	Expanding Eligible Waste Streams
	T-3	Expanding Eligible Waste Streams
FormFactor, Inc	U-1	Clarifying Eligible Technologies
IPC Association Connecting Electronic Industries	V-1	Waste Characterization
	V-2	Waste Characterization
	V-3	General Comments, Duplicates, or No Change Requested
	V-4	Clarifying Eligible Technologies
	V-5	Clarifying Eligible Technologies
	V-6	Waste Characterization
	V-7	Waste Characterization
	V-8	Waste Characterization
	V-9	Waste Characterization
	V-10	Waste Characterization
	V-11	Clarifying Eligible Technologies
	V-12	General Comments, Duplicates, or No Change Requested
	V-13	General Comments, Duplicates, or No Change Requested
Metal Finishing Association of Southern California, Inc. and Surface Technology Association	W-1	Clarifying Eligible Technologies
	W-2	General Comments, Duplicates, or No Change Requested
	W-3	General Comments, Duplicates, or No Change Requested
County of Riverside	X-1	General Comments, Duplicates, or No Change Requested
	X-2	General Comments, Duplicates, or No Change Requested
	X-3	General Comments, Duplicates, or No Change Requested
	X-4	General Comments, Duplicates, or No Change Requested
	X-5	General Comments, Duplicates, or No Change Requested
	X-6	General Comments, Duplicates, or No Change Requested
	X-7	General Comments, Duplicates, or No Change Requested
	X-8	General Comments, Duplicates, or No Change Requested
	X-9	General Comments, Duplicates, or No Change Requested
	X-10	General Comments, Duplicates, or No Change Requested