J&B Enterprises Inc.

1650 Russell Ave.
Santa Clara, CA 95054

CAD 982052797

July 1, 2011

Series B – Standardized Permit Application

July 1, 2011

Mr. Waqar Ahmad, Permit Engineer
Standardized Permitting Branch
Hazardous Waste Management Program
Department of Toxic Substances Control
700 Heinz Avenue, 2nd Floor
Berkeley, CA 94710

Subject: Formal Letter of Transmittal for J&B Enterprises EPA ID CAD 982052797, Application for "Series B" Standardized Permit

Dear Mr. Ahmad:

J&B Enterprises, EPA ID Number CAD 982052797, is pleased to submit the following Series B Standardized Permit Application, July 1, 2011. Included in this submittal are both the Part A and the Part B Applications, four copies each. Two of the copies are for the DTSC files and are to be considered confidential, the other two, identified as "Sanitized Copy" are for display and general public review. Should you have any questions, please call. Thank you.

Respectfully yours,

Mr. Ken Epsman, Owner/Operator
J&B Refining, a California Corporation dba J&B Enterprises

KE/js

SECTION I	**FACILITY IDENTIFICATION AND LOCATON**
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(Reference Department of Toxic Substance Control, "Standardized Permit Application Operation Plan Instruction", DTSC 1176 (8/2006) DRAFT)

STANDARDIZED PERMIT PART B APPLICATION

SECTION I - FACILITY IDENTIFICATION

For

J&B ENTERPRISES
CAD 982052797

July 1, 2011

SECTION I

FACILITY IDENTIFICATION AND LOCATON

INTRODUCTION

This application is for the renewal of an existing, permitted facility. There are no significant changes being made to the facility, equipment, personnel, processes used. The hazardous wastes received and treated at this facility are the same.

The changes that are being made consist of minor changes, such as inclusion of a few additional waste codes initially missed in the original permit application and clarification regarding the waste streams currently being handled at the facility; but little else has changed.

The one minor change to the equipment is the addition of a single, new process tank, 200 gallons in size, in the gold (precious metals?) processing area, to facilitate the day-to-day operations already being conducted. The facility is the same as it was ten years ago.

A. Facility Identification

1. Facility Name: **J&B Refining, d.b.a. J&B Enterprises Inc.**

2. EPA Identification Number: CAD 982052797.

3. Address (Site Location): 1650 Russell Avenue
Santa Clara, CA 95054

   Address (Mailing): 1650 Russell Avenue
Santa Clara, CA 95054

4. Telephone number: 408.988.7900

5. The facility is located in a designated Heavy Industrial Zone, surrounded by industrial sites and commercial facilities. There are no schools, parks, or residences within the immediate vicinity of the site. The nearest hospital is several miles away.

6. The depth of the groundwater at this specific location is unknown. The groundwater in this area is typically encountered between 15 – 20 feet below surface grade. There are no immediate bodies of water in the immediate vicinity, but the south end of the San Francisco Bay at Alviso is approximately 3 miles distance. There are no streams or creeks in the immediate vicinity.

This is a permit renewal with minor changes that include one new 200-gallon process tank, and the addition of a few hazardous waste codes for more complete waste descriptions. There are no other significant changes to the equipment, wastes received, or operations.

B. Preparer Information

1. Firm: California Environmental Management Service Company, Inc.

2. Responsible Persons: John Schultz, Consultant, R.E.A. # 00025

3. Telephone: 650.966.1526

4. Preparer Signature:

_____ _____
John Schultz Date

C. Owner/Operator Signature, Certification, and Disclosure Statement

1. The following facility operator certification is required under California Code of Regulations (CCR), Title 22, Section 66270.11(d):

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I further certify that the property owner has been informed that a hazardous waste facility will be operated on the premises. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Ken Epsman _____ _____
Owner, Print Name and Sign Date

Ken Epsman _____ _____
Operator, Print Name and Sign Date

D. Facility Location Map and Site Layout Diagrams

1. Legal Property Boundaries: See Section II, Attachment 3, "Parcel Map and Legal Description of Property"

2. Buildings, Secondary Containment, and Storage Areas: See Section II, Attachment 5, "J&B Enterprises Facility Map" (Site and Detail)

3. Names of Operations: See Section II, Attachment 5, "J&B Enterprises Facility Map" (Site and Detail)

4. Property Boundaries and Storage and Treatment Areas: See Section II, Attachment 3, "Parcel Map and Legal Description of Property" and Attachment 5, "J&B Enterprises Facility Map" (Site and Detail)

5. Security Provisions. See Section II, Attachment 5, "J&B Enterprises Facility Map" showing the fence and locked gates surrounding the facility. In addition, the facility is equipped with a security system and locked access.

6. See Section II, Attachment 3, "Parcel Map and Legal Description of Property" and Attachment 5, "J&B Enterprises Facility Map". There are no internal or access roads, just a driveway.

E. Legal Description of the Property: See Section II, Attachment 3, "Legal Description of Property, Parcel Map"

F. Confidentiality Request and Justifications

1. The following portions of this permit application are being claimed as permanent confidential trade secret information.

Two copies of the plan are provided as required; one with the trade secret items clearly marked and the other with those items deleted.

2. Justification for these claims is as follows:

a. The recycling processes and equipment used at J&B Enterprises have been developed for our use alone, after much expense and work, and should be considered confidential trade secrets. While some of the general principles of precious metal recycling may be widely available, the details of the operations and equipment used at J&B Enterprises are proprietary information.

b. In order to maintain the trade secret status of our recycling operations, the details of these operations have been kept confidential. Specific details regarding the recycling operations and equipment are known only to the corporate officers, the facility Supervisor, a limited number of employees, the DTSC, and California Environmental Management Service Co., Inc. (CEMS), the environmental consulting firm that prepared the Part B application.

c. Details regarding the recycling operations and equipment used at our facility have not been distributed outside of the company, except to the DTSC and CEMS as necessary. As evidence of this, J&B Enterprises does not give detailed information on facility operations to its' customers although, once again, the general principles of precious metal recycling are known and freely discussed.

d. J&B Enterprises would suffer substantial harm if the details of our gold recycling process were disclosed to the general public, or to our competitors, as this process (or a portion thereof) could easily be duplicated. As a result, our competitive edge in providing a unique and cost effective service to waste generators and product purchasers would be lost, and the company would suffer a substantial financial loss as a result.

e. There have been significant monetary expenditures in the Research and Development of some of the equipment used at the facility. This includes expenditures both for the design of the equipment, and for an independent engineering review to help ensure health and safety, and for compliance purposes. In addition, there have been considerable expenditures of human resources in the development and fine-tuning of the recycling process used at our facility, as well as other material and outside consulting costs.

f. As long as our claim of trade secret confidentiality is maintained, the details of the recycling operations at our facility could not be easily obtained or duplicated by anyone outside of J&B Enterprises.

g. J&B Enterprises therefore requests that those portions marked "Trade Secret" or "Confidential" be considered trade secret information, and that this trade secret status be maintained for the life of the facility.

Section 1 – Attachment 1

Request for Confidential Trade Secret Privilege

July 1, 2011

Mr. Waqar Ahmad, Permit Engineer
Department of Toxic Substances Control, Region 2
700 Heinz Avenue, Suite # 200
Berkeley, CA 94710-2737

Subject: J&B Enterprises - Confidential Trade Secret Privilege Claim

Dear Mr. Ahmad:

J&B Enterprises is requesting that certain details of the recycling operations at J&B Enterprises constitute a trade secret and that J&B Enterprises should be granted the privilege of confidentiality. The justification for this claim is as follows:

1. The recycling processes and equipment used at J&B Enterprises have been developed for our use alone, after much expense and work, and should be considered confidential trade secrets. While some of the general principles of precious metal recycling may be widely available, the details of the operations and equipment used at J&B Enterprises are a proprietary secret.

2. In order to maintain the trade secret status of our recycling operations, the details of these operations have been kept confidential. Specific details regarding the recycling operations and equipment are known only to the corporate officers, the facility Supervisor, a limited number of employees, the DTSC, and California Environmental Management Service Co., Inc. (CEMS), the environmental consulting firm that prepared the Part B application.

3. Details regarding the recycling operations and equipment used at our facility have not been distributed outside of the company, except to the DTSC and CEMS as necessary. As evidence of this, J&B Enterprises does not give detailed information on facility operations to its' customers, although, once again, the general principles of precious metal recycling are known and freely discussed.

4. J&B Enterprises would suffer substantial harm if the details of our gold recycling process were disclosed to the general public, or to our competitors, as this process (or a portion thereof) could easily be duplicated. As a result, our competitive edge in providing a unique and cost effective service to waste generators and product purchasers would be lost, and the company would suffer a substantial financial loss as a result.

5. There have been significant monetary expenditures in the Research and Development of some of the equipment used at the facility. This includes expenditures both for the design of the equipment, and for an independent engineering review to help ensure health and safety, and for compliance purposes. In addition, there have been considerable expenditures

of human resources in the development and fine-tuning of the recycling process used at our facility, as well as other material and outside consulting costs.

6. As long as our claim of trade secret confidentiality is maintained, the details of the recycling operations at our facility could not be easily obtained or duplicated by anyone outside of J&B Enterprises.

J&B Enterprises would like to emphasize that while the general principles of gold recycling are widely documented and freely available, the exact procedures used at our facility are a carefully guarded trade secret that we have developed and refined over a period of years, at significant costs in manpower and dollars.

Furthermore, we believe that the free distribution of our Process Flow Schematics would result in significant and unfair economic disadvantage and hardship to our company. Access to our trade secrets would allow competitors to fine-tune their recycling processes at our expense and provide potential new start-up competition that may not have the R&D funding, an advantage at our cost.

We appreciate the consideration. I hope this letter answers your questions, but please don't hesitate to contact me if you require any additional information.

Sincerely,

Ken Epsman, Owner/Operator
J&B Enterprises

STANDARDIZED PERMIT APPLICATION

SECTION III - WASTE ANALYSIS PLAN

For

J&B ENTERPRISES
CAD982052797

July 1, 2011

SECTION III

WASTE ANALYSES PLAN

INTRODUCTION

The purpose of the Waste Analyses Plan (WAP) is to characterize each waste stream to ensure that the facility is authorized to manage the waste generated or received. Sampling criteria has been established, and a sampling and analyses plan have been developed to the criteria. An annual sampling event is used to provide periodic verification of the hazardous waste generated and received at the facility. Plans have also been devised to check and test suspect and unknown wastes that may be found in the course of handling or treatment. The details are found in the following section and tables.

SECTION III - WASTE ANALYSIS PLAN

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(Note: The Process Flow Diagrams are in Section II, Attachment 7 of this document.)

A. WASTE IDENTIFICATION

1. Aqueous Solutions with Cyanide and Precious Metals (on-site and off-site generated)
This waste group is comprised of Precious Metal Bearing Wastes with Cyanides, such as gold plating solutions, gold plating dragout rinses, gold strip solutions, gold strip dragout, silver plating solutions, silver strip solutions and other precious metal solutions with cyanide.

EPA waste code(s) = F006, F007/F008, F009/D002/D003/D004/D006/D007/D008/D011
California waste code(s) = 121, 122, 123, 131, 132, 134, 135, 141, 551, 711, 722, 724, 726, 728
Typical specific gravity = 1.01 to 1.2
Flash point = None

This waste type consists of spent plating, etching, stripping, surface coating, and rinsing solutions and sludge's that contain cyanides and precious metals. These wastes are generated by the electronics manufacturing and jewelry manufacturing industries. These wastes contain between 50 to 100,000 ppm cyanide, and therefore some of the wastes constitute a potential health threat via acute toxicity and a reactivity hazard; while other, more dilute, wastes constitute a minor potential health threat, but not a reactivity hazard.

The pH of these wastes varies from a low of about 4.5 to a high of above 13, and some of the wastes therefore constitute a corrosive hazard. Some of these waste solutions may also contain silver, cadmium, chromium, copper, nickel, lead, thallium, antimony, platinum, palladium, arsenic, and/or zinc at concentrations of the hazardous waste threshold levels specified in 22 CCR 66261.24. This material is incompatible with acids.

The treatment standards for this liquid hazardous waste are listed in 22 CCR 66268.40, and are based on grab samples. The treatment standards for these wastes include: Cyanides (Total) 1.2 mg/L, Cyanides (amenable) 0.86 mg/L, Arsenic 5.0 mg/L, Cadmium 1.0 mg/L, Chromium (Total) 2.77 mg/L, Lead 0.69 mg/L, Nickel 3.98 mg/L, Silver 5.0 mg/L, and Caustic deactivation plus Universal Treatment Standards in 22 CCR 66268.48.

2. Non-Cyanide Containing Precious Metal Solutions, Non-Acidic (on-site and off-site generated)
This waste group is composed of Miscellaneous Precious Metal Bearing Wastes, such as, but not limited to gold and silver solutions, platinum and palladium solutions, silver solutions, electrowinning, and other precious metal solutions.
EPA waste code(s) = nonRCRA or D002/D004/D006/D007/D008/D009, D010, D011
California waste code(s) = 121, 122, 123, 131, 132, 133, 134, 135, 141, 171, 331, 342, 343, 491, 541, 551, 721, 722, 724, 726, 728
Specific gravity = 1.05 to 1.1
Flash point = None

This waste type consists of unused, new, and spent aqueous precious metal bearing solutions that are not cyanide based, and are generated from plating, coating, and stripping operations in the electronics industry. These solutions are toxic due to the presence of antimony, arsenic, cadmium, chromium, copper, lead, nickel, silver, zinc, platinum, palladium, and/or thallium - metals that are environmentally persistent and bioaccumulative substances at or above concentrations of the hazardous waste cut-off levels specified in 22 CCR 66261.24. These solutions are all non-acidic, and have a pH of about 6 to above 12.5, and therefore some of these wastes constitute a corrosives hazard.

The treatment standards for the non-RCRA liquid hazardous wastes in this classification are listed in 22 CCR 66268.107, and are based on grab samples. These treatment standards include Antimony 15.0 mg/L, Arsenic 5.0 mg/L, Barium 100.0 mg/L, Beryllium 0.75 mg/L, Cadmium 1.0 mg/L, Chromium (VI) 5.0 mg/L, Chromium (III) 560.0 mg/L, Cobalt 80.0 mg/L, Copper 25.0 mg/L, Lead 5.0 mg/L, Mercury 0.2 mg/L, Molybdenum 350.0 mg/L, Nickel 20.0 mg/L, Selenium 1.0 mg/L, Silver 5.0 mg/L, Thallium 7.0 mg/L, Vanadium 24.0 mg/L, and Zinc 250.0 mg/L.

The treatment standards for the RCRA liquid hazardous wastes in this classification are listed in 22 CCR 66268.40, and are based on grab samples. These treatment standards include Arsenic 5.0 mg/L, Cadmium 1.0 mg/L, Chromium 5.0 mg/L, Lead 0.69 mg/L, Silver 5.0 mg/L, and Caustic deactivation plus Universal Treatment Standards in 22 CCR 66268.48.

3. <u>Iodine Etch Solutions (off-site generated)</u>
EPA waste code(s) = Non-RCRA
California waste code(s) = 121, 122, 123, 131, 132, 133, 134, 135, 141, 331, 342, 343, 491, 551, 726
Specific gravity = 1.05 to 1.2
Flash point = None

This waste type consists of spent solutions that are generated from the electronics and jewelry industries via gold plating, etching and stripping processes, using an iodine-potassium iodide based strip solution. These wastes have a pungent irritating odor, are opaque, and have a dark purple/brown color. These iodine-iodide based gold etch solutions are hazardous due to the presence of Iodine which is an irritating material, and is regulated as a Class 9 material by the DOT. This solution is not corrosive, having a pH of about 3.5 to 6.5, but may contain copper and/or nickel - metals that are environmentally persistent and bioaccumulative substances at or above concentrations of the hazardous waste cut-off levels specified in 22 CCR 66261.24.

The treatment standards for this liquid hazardous waste are listed in 22 CCR 66268.107, and are based on grab samples. These treatment standards are as follows: Antimony 15.0 mg/L, Arsenic 5.0 mg/L, Barium 100.0 mg/L, Beryllium 0.75 mg/L, Cadmium 1.0 mg/L, Chromium (VI) 5.0 mg/L, Chromium (III) 560.0 mg/L, Cobalt 80.0 mg/L, Copper 25.0 mg/L, Lead 5.0 mg/L, Mercury 0.2 mg/L, Molybdenum 350.0 mg/L, Nickel 20.0 mg/L, Selenium 1.0 mg/L, Silver 5.0 mg/L, Thallium 7.0 mg/L, Vanadium 24.0 mg/L, and Zinc 250.0 mg/L.

4. Residues Containing Precious Metals (on-site and off-site generated)
This was includes filters, wipes, debris, and containers.
EPA waste code(s) D002/D003/D004/D006/D007/D008/D009/D010/D011/ F006/F007/F008/F009
California waste code(s) = 141, 171, 181, 331, 342, 343, 491, 512, 513, 551
Specific gravity = 0.25 (average)
Flash point = Same as for paper/cotton

This waste type consists of solid scrap items containing precious metals, including, but not limited to, gloves, wipes, debris, plating bath filters, empty containers, dragout rinse water filters, ion exchange resins, and sludge's. The majority of this waste is generated from off-site electroplating operations, although the wipes are also generated from on-site clean-up activities. These solid hazardous wastes include spent plating bath filters containing residues of gold and/or other precious metals.

Some of these wastes contain cyanide; thereby constituting a potential health threat through acute toxicity, and a reactivity hazard. Also present may be antimony, arsenic, cadmium, chromium, copper, lead, nickel, silver, thallium, and/or zinc - metals that are environmentally persistent and bioaccumulative substances at or above concentrations of the hazardous waste cut-off levels specified in 22 CCR 66261.24. This material is incompatible with acids.

The treatment standards for this solid hazardous waste are listed in 22 CCR 66268.40, and are based on grab samples. These treatment standards are as follows: Cyanide (T) 590 mg/L, Cyanide (amenable) 30 mg/L, Arsenic 5.0 mg/L EP or 5.0 mg/L TCLP, Cadmium 0.19 mg/L TCLP, Chromium (Total) 0.86 mg/L TCLP, Lead 0.37 mg/L TCLP, Nickel 5.0 mg/L TCLP, Silver 0.30 mg/L TCLP, and Caustic deactivation plus Universal Treatment Standards in 22 CCR 66268.48.

5. Solder Dross (off-site generated)
EPA waste code(s) = D008/D004/D006/D011
California waste code(s) = 141, 171, 172, 181, 491
Specific gravity = 8 (avg.)
Flash point = None

This waste type consists of tin/lead based solder dross that is generated from off-site electronic assembly operations (wave soldering, etc.). These wastes have a metallic gray color and either no strong odor or a slight oily smell. The treatment for this waste type consists of repackaging and re-manifesting only (waste consolidation).

These solid hazardous wastes consist largely of a combination of tin and lead. Approximately 35 - 40% is lead, a toxic material and an environmentally persistent and bioaccumulative substance. These wastes may also contain trace levels of antimony, arsenic, cadmium, copper, nickel, silver, and zinc - metals that are environmentally persistent and bioaccumulative substances at or above concentrations of the hazardous waste cut-off levels specified in 22 CCR 66261.24.

The treatment standards for this solid hazardous waste are listed in 22 CCR 66268.40, and are based on grab samples. These treatment standards are as follows: Arsenic 5.0 mg/L EP or TCLP, Cadmium 1.0 mg/L TCLP, Lead 5.0 mg/L - TCLP or EP, and Silver 5.0 mg/L TCLP.

6. Photographic/Silver Solutions (off-site generated)
EPA waste code(s) = D011/D007
California waste code(s) = 541, 123, 131, 132, 133, 134, 135, 141, 331, 342, 343, 491, 512, 513,
Specific gravity = 1.1 to 1.4
Flash point = above 212 °F

This waste type consists of spent photographic solutions with silver. These solutions are toxic due to the presence of silver, an environmentally persistent and bioaccumulative substance, at a concentration above the hazardous waste cut-off level, listed in 22 CCR 66261.24. In addition, Chromium and Zinc may also be present at concentrations of the hazardous waste cut-off levels listed in 22 CCR 66261.24. These solutions are all non-corrosive and have a pH of about 7 to 10. The treatment for this waste type consists of repackaging and re-manifesting only (waste consolidation).

The treatment standards for these hazardous wastes are listed in 22 CCR 66268.40, and are based on grab samples. These treatment standards are as follows: Silver 5.0 mg/L, and Chromium 5.0 mg/L.

7. Cyanide Strip Solution (on-site and off-site generated)
EPA waste code(s) = D002/D003/D004/D006/D007/D008/D009/D010/D011/F009
California waste code(s) = 121, 122, 123, 131, 132, 133, 134, 135, 331, 342, 343, 491, 711, 721, 722, 724, 726, 728
Specific gravity = 1.05 to 1.08
Flash point = None

This waste type consists of on-site generated cyanide based stripping solutions with gold and/or other precious metals. These wastes are generated on-site from the stripping of precious metal containing non-hazardous, metal scrap. These wastes have a slight ammonia-like odor, are translucent, and have a brown color. These solutions contain approximately 0.5 - 2% cyanide, constituting a serious potential health threat via acute toxicity and a reactivity hazard.

These solutions are both poisonous and corrosive with a pH of about 11.5-13.5. The strip solutions may also contain nickel, copper, cadmium, chromium, lead, arsenic, antimony, beryllium, silver, thallium, and/or zinc- metals that are environmentally persistent and bioaccumulative substances at or above concentrations of the hazardous waste cut-off levels specified in 22 CCR 66261.24.
This material is incompatible with acids.

The treatment standards for these liquid hazardous wastes are listed in 22 CCR 66268.40, and are based on grab samples. These treatment standards include Cyanides (amenable) 0.86 mg/L, Arsenic 5.0 mg/L, Cadmium 1.0 mg/L, Chromium (T) 5.0 mg/L, Lead 5.0 mg/L, Silver 5.0 mg/L, and Caustic deactivation plus Universal Treatment Standards in 22 CCR 66268.48.

8. Precious Metal Precipitate (on-site generated)
This is a product and not hazardous waste unless disposed of. This waste is only occasionally generated, a few times a year.
EPA waste code(s) = D004/D006/D007/D008/D011/F007/F009
California waste code(s) = 121, 122, 131, 132, 133, 134, 342, 343, 491, 171
Specific gravity = approximately 1.5 to 2.5
Flash point = None

This waste type consists of either a brownish gold mud with no strong odor for the hydrosulfite process, or a black sandy sludge with no strong odor for the zinc process. In either case, this waste typically contains 90 to 99% gold (minus moisture content) prior to melting in the furnace. This waste contains no significant levels of cyanide, but may contain nickel, copper, cadmium, chromium, lead, antimony, arsenic, beryllium, silver, thallium, and/or zinc - metals that are environmentally persistent and bioaccumulative substances at or above concentrations of the hazardous waste cut-off levels specified in 22 CCR 66261.24.

The treatment standards for this liquid hazardous waste are listed in 22 CCR 66268.40, and are based on grab samples. These treatment standards are as follows: Cyanides (total) 590 mg/L, Cyanides (amenable) 30 mg/L, Cadmium 0.19 mg/L TCLP, Chromium 0.86 mg/L TCLP, Lead 0.37 mg/L TCLP, Nickel 5.0 mg/L TCLP, Silver 0.30 mg/L TCLP, and Arsenic 5.0 mg/L EP or TCLP

9. Precious Metal Precipitation Supernatant (Lean Liquor)/Water Wash (on-site generated)
EPA waste code(s) = D002/D003/D004/D006/D007/D008/D011/F007/F009
California waste code(s) = 121, 122, 131, 132, 133, 134, 342, 343, 491,711, 721, 722, 724, 726, 728
Specific gravity = 1.05 to 1.15
Flash point = None

These wastes are only occasionally generated on-site anymore (less than once a year) and are from the filtering of the precious metal precipitate (lean liquor) and subsequent sludge washing (water wash). These wastes contain cyanide at concentrations of up to 2% (typically <1%); thereby constituting a serious potential health threat via acute toxicity and a reactivity hazard. These solutions have a pH of between of about 8 (sulfite process) to more than 12.5 (zinc process), and some of the solutions therefore constitute a corrosives hazard. This waste solution may also contain nickel, copper, cadmium, lead, antimony, arsenic, beryllium, chromium, cobalt, silver, thallium, and/or zinc; environmentally persistent and bioaccumulative substances at concentrations above their respective hazardous waste cut-off levels specified in 22 CCR 66261.24. This material is incompatible with acids.

The treatment standards for these liquid hazardous wastes are listed in 22 CCR 66268.40, and are based on grab samples. These treatment standards are: Cyanides (total) 1.2 mg/L, Cyanides (amenable) 0.86 mg/L, Arsenic 5.0 mg/L, Cadmium 1.0 mg/L, Chromium 2.77 mg/L, Lead

0.69 mg/L, Nickel 3.98 mg/L, Silver 5.0 mg/L, and caustic deactivation plus Universal Treatment Standards in 22 CCR 66268.48.

10. Acid Purification Solution (on-site generated)
EPA waste code(s) = D002/D004/D006/D007/D008/D009/D011/F007/F008/F009
California waste code(s) = 131, 132, 135, 171, 181, 721, 722, 724, 726, 728, 792
Specific gravity = 1.1 to 1.15
Flash point = None

This waste type consists of on-site generated acid (nitric and/or hydrochloric) solutions with trace levels of gold and/or other precious metals. These wastes have a distinct sharp acid odor, are translucent, and are clear to light green in color. These solutions have a pH of <1, constituting a severe corrosion hazard. In addition, the acid waste may contain antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, silver, thallium, and/or zinc; environmentally persistent and bioaccumulative substances at concentrations of the hazardous waste cut-off levels specified in 22 CCR 66261.24. This material is incompatible with cyanides.

The treatment standards for this liquid hazardous waste are listed in 22 CCR 66268.40 and 66268.43, and are based on grab samples. These treatment standards are: Cyanides (total) 1.2 mg/L, Cyanides (amenable) 0.86 mg/L, Arsenic 5.0 mg/L, Cadmium 1.0 mg/L, Chromium 2.77 mg/L, Lead 0.69 mg/L, Nickel 3.98, Silver 5.0 mg/L, and ACID plus Universal Treatment Standards in 22 CCR 66268.48.

11. Neutralized Acid Purification Solution (on-site generated)
EPA waste code(s) = D004/D006/D007/D008/D011/F007/F009
California waste code(s) = 121, 132, 135, 171, 181, 721, 722, 724, 726, 728
Specific gravity = 1.15 to 1.3
Flash point = None

This waste type consists of the acid purification stream identified as waste item 10 above, but post-pH neutralization. These wastes have no strong odor and a milky green color. These wastes are no longer corrosive and have a pH of approximately 9 to 12. These wastes may also contain antimony, arsenic, beryllium, cadmium, chromium, copper, lead, nickel, silver, thallium, and/or zinc; environmentally persistent and bioaccumulative substances at concentrations of the hazardous waste cut-off levels specified in 22 CCR 66261.24.

The treatment standards for this hazardous waste are listed in 22 CCR 66268.40, and are based on grab samples. These treatment standards are: Cyanides (total) 590 mg/L, Cyanides (amenable) 30 mg/L, Arsenic 5.0 mg/L EP, Cadmium 0.19 mg/L TCLP, Chromium 0.86 mg/L TCLP, Lead 0.37 mg/L TCLP, Nickel 5.0 mg/L TCLP, and Silver 0.30 mg/L TCLP.

12. Evaporator Solids
EPA waste code(s) = D002/D003/D004/D006/D007/D008/D010/D011/F006/F007/F008/F009
California waste code(s) = 171
Specific gravity = 0.7 to 0.9
Flash point = None

This waste type is generated in the evaporator tank, and consists of a solid treatment residual from the precious metals reclamation operation, as discussed in detail in Section 5. These wastes have an ammonia-like odor, a brownish-black color, and a rock like appearance. This manufacturing by-product contains approximately 1-3% Cyanide, constituting a serious potential acute toxicity threat and a reactivity hazard. This waste type has a pH of 10 to 13, and may therefore constitute a corrosives hazard. In addition, this by-product may contain antimony, arsenic, beryllium, cadmium, cobalt, chromium, copper, lead, nickel, silver, selenium, thallium, and/or zinc; environmentally persistent and bioaccumulative substances at concentrations of the hazardous waste cut-off levels listed in 22 CCR 66261.24. This material is incompatible with acids.

The treatment standards for this solid hazardous waste are listed in 22 CCR 66268.40 and 66268.43 and are based on grab samples. These treatment standards are as follows: Arsenic 5.0 mg/L EP, Cadmium 0.19 mg/L TCLP, Chromium 0.86 mg/L TCLP, Cyanide (T) 590 mg/L, Cyanide (amenable) 30 mg/L, Lead 0.37 mg/L TCLP, Nickel 5.0 mg/L TCLP, Silver 0.30 mg/L TCLP, and Caustic plus Universal Treatment Standards in 22 CCR 66268.48.

13. Non-Reactive Dragout Solutions (off-site generated)

EPA waste code(s) = F007/F008/F009
California waste code(s) = 121, 131, 132, 135
Typical specific gravity = 1.01 to 1.05
Flash point = None

This waste type consists of spent plating dragout rinsewaters that contain trace levels of cyanide and precious metals, but whose cyanide content makes the waste non-reactive. These wastes are generated by the electronics manufacturing and jewelry industries, contain <250 ppm cyanide, and therefore constitute a minor potential health threat via acute toxicity. Discussions with the EPA Industry Assistance Hotline have indicated that the EPA uses a cyanide concentration of 250 ppm as a guideline when assessing the reactivity hazards for cyanide bearing wastes. Wastes with cyanide contents lower than 250 ppm are deemed non-reactive in that they are not able to generate a sufficient quantity of toxic gases, vapors, or fumes to pose a danger to human health or the environment upon exposure to a pH of between 2 and 12.5.

The pH of these wastes is between 2 and 12.5, and some the wastes therefore do not constitute a corrosive hazard. Some of these waste solutions may also contain silver, copper, nickel, lead, and/or zinc at concentrations of the hazardous waste threshold levels specified in 22 CCR 66261.24. This material is incompatible with acids.

The treatment standards for this liquid hazardous waste are listed in 22 CCR 66268.40, and are based on grab samples. These treatment standards for these wastes include: Cyanides (Total) 1.2 mg/L, Cyanides (amenable) 0.86 mg/L, Chromium (Total) 2.77 mg/L, Lead 0.69 mg/L, and Nickel 3.98 mg/L.

B. PARAMETERS OF WASTE ANALYSIS PLAN FOR OFF-SITE GENERATED HAZARDOUS WASTES

1. Purpose

Analysis of waste accepted for treatment from generators is conducted for the following purposes:

a. To ensure that materials are properly identified and labeled.
b. To determine the metal content and monetary worth of each waste accepted.
c. To ensure that only proper materials are accepted for storage or treatment.

2. Waste Analysis Parameters

Waste sampling and analysis is performed for two different purposes:

a. To verify contents and determine the metal content and net value of each drum of waste received at the facility (Type A Analyses), and

b. To help ensure regulatory compliance and a safe and healthy workplace by preventing hazardous chemical interactions (Type B Analyses).

All of the Type B analyses are performed at an outside DTSC certified hazardous waste testing lab.

Aqueous Solutions With Cyanide and Precious Metals
Type A: pH, Specific gravity, Gold (or other precious metal)
Type B: pH, Cyanide, Antimony, Arsenic, Cadmium, Chromium (T), Copper, Nickel, Lead, Platinum, Palladium, Silver, Thallium, and Zinc - Analysis will quantify the acute toxicity and reactivity potential and the concentrations of the environmentally persistent and bioaccumulative substances.

Non-Cyanide Containing Precious Metal Solutions, Non-Acidic
Type A: pH, Specific gravity, Gold (or other precious metal)
Type B: pH, Antimony, Arsenic, Cadmium, Chromium (T), Copper, Lead, Nickel, Platinum, Palladium, Silver, Thallium, and Zinc- Analysis will quantify the acute toxicity and reactivity potential and the concentrations of the environmentally persistent and bioaccumulative substances.

Iodine Etch Solution
Type A: pH, Specific gravity, Gold

Type B: pH, Copper, Nickel, Lead, Silver - Analysis will quantify the concentrations of the environmentally persistent and bioaccumulative substances, as well as provide information on the corrosion hazard of the solution.

Residues Containing Precious Metals
Type A: pH
Type B: pH, Cyanide, Antimony, Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Silver, Thallium, and Zinc - Analysis will quantify the acute toxicity and reactivity potential and the concentrations of the environmentally persistent and bioaccumulative substances.

Solder Dross
Type A: Melting point, Density, Color test (all type A testing is done at receiving facility)
Type B: Lead, Antimony, Arsenic, Cadmium, Copper, Nickel, Silver, and Zinc - Analyses will quantify the concentrations of the environmentally persistent and bioaccumulative substances.

Photographic Solutions with Silver
Type A: pH
Type B: pH, Silver, Chrome, and Zinc - Analysis will quantify the acute toxicity potential and the concentrations of the environmentally persistent and bioaccumulative substances.

Non-reactive Dragout Solutions
Type A: pH, Specific gravity, Gold (or other precious metal)
Type B: pH, Cyanide, Copper, Nickel, Lead, Silver, and Zinc - Analysis will quantify the acute toxicity and reactivity potential and the concentrations of the environmentally persistent and bioaccumulative substances.

3. Waste Analysis Methods

All Type B analyses will be performed via the following EPA approved methods and procedures, or using another equivalent method, utilizing standard detection limits except as determined necessary by the certified testing lab; such as in the case of serial dilutions:

Parameter	EPA Method #	Typical detection limit(s)[1]
pH	150.1[a]/3045[b]/9040[b]/9045[b]	Not Applicable
Cyanide (Total)	335.2a/9010b	0.04 mg/L 1.2 mg/L solids
Antimony	200.7[a]/6010[b]/7040[b]	2 mg/L liquids 10 mg/kg solids
Arsenic	206.2[a]/206.3[a]/6010[b] 7060[b]	0.1 mg/L liquids, 1-mg/kg solids
Barium	200.7[a]/6010[b]/7080[b]	0.5 mg/L liquids, 2.0 mg/kg solids
Beryllium	200.7[a]/6010[b]/7090[b]	0.2 mg/L liquids, 2.0 mg/kg solids
Cadmium	200.7[a]/6010[b]/7130[b]	0.02 mg/L liquids, 2.0 mg/kg solids
Chromium (VI)	218.4[a]/218.5[a]/7197[b]	0.05 mg/L liquids, 2.0 mg/kg solids
Chromium (Total)	200.7[a]/6010[b]/7190[b]	0.03 mg/L liquids, 2.0 mg/kg solids
Cobalt	200.7[a]/6010[b]/7200[b]	0.05 mg/L liquids, 5.0 mg/kg solids
Copper	200.7[a]/6010[b]/7210[b]	0.03 mg/L liquids, 2.0 mg/kg solids
Lead	239.2[a]/6010[b]/7420[b]/ 7421[b]	0.05 mg/L liquids, 1.0 mg/kg solids, 20 mg/kg solder dross (dilution effect)
Mercury	245.1[a]/245.2[a]/6010[b]/ 7470[b]/7471[b]	0.002 mg/L liquids, 0.1 mg/kg solid
Molybdenum	239.2[a]/6010[b]/7480[b]	0.5 mg/L liquids, 5.0 mg/kg solids
Nickel	239.2[a]/6010[b]/7520[b]	0.05 mg/L liquids, 5.0 mg/kg solids
Palladium	253.2[a]/6010[b]	0.05 mg/L liquids, 5.0 mg/kg solids

1 Some of the actual laboratory detection limits will be higher than the numbers listed in this table due to the sample dilution effect.

Platinum	255.2[a]/6010[b]	0.02 mg/L liquids, 2.0 mg/kg solids
Selenium	270.2[a]/270.3[a]/6010[b]/ 7740[b]	0.05 mg/L liquids, 2.0 mg/kg solids
Silver	239.2[a]/6010[b]/7760[b]	0.02 mg/L liquids, 2.0 mg/kg solids
Thallium	239.2[a]/6010[b]/7840[b]	0.2 mg/L liquids, 20.0 mg/kg solids
Vanadium	239.2[a]/6010[b]/7910[b]	0.5 mg/L liquids, 5.0 mg/kg solids
Zinc	239.2[a]/6010[b]/7950[b]	0.05 mg/L liquids, 20.0 mg/kg solids

[a] US EPA 600/4-79-020/Methods for Chemical Analysis of Water and Waste
[b] US EPA SW-846/Test Methods for Evaluation of Solid Waste

4. Methods Used to Verify Waste Contents Upon Receipt

a. Check the waste contents listed on the UHWM against the contents listed on both the container label and the Waste Profile on file for the particular generator and waste stream.

b. Collect a representative waste sample from the hazardous waste containers received at the facility by opening the shipping container, stirring the contents, and removing the sample from around the middle of the drum using either a clean polypropylene drum sampler (drum thief), pipette and bulb, or a clean polypropylene or glass sample bottle or tube. See Section 8, for details on required sampling methods and safety procedures to be followed in obtaining all hazardous waste samples.

c. As an alternative, hazardous waste containers with filters, wipes, or empty containers will be sampled by manually removing a spent filter or wipe and placing it in a clean empty beaker or glass container, and then washing the filter or wipe with water. A sample of the water rinse is then carefully poured into a clean sample container. Samples are collected from empty containers by filling a representative container with a small amount of water, rinsing thoroughly, and then carefully pouring the rinse water into a clean sample container.

d. Determine the pH of the waste sample (or water rinse there from) using pH paper or a portable meter, and compare this value to the reference pH in the Waste Profile.

e. If the visual examination or pH determination leaves any question regarding the waste contents, a field test for cyanide content may be conducted as described below.

f. Only those wastes which are properly described and for which current Waste Profiles are on file may be accepted. All other waste materials may not be accepted without prior approval. Should the solution be acceptable, complete the manifest and save the sample for off-site precious metal and specific gravity determinations.

g. As an exception to the above described sampling procedures, the solder dross material is visually examined upon receipt at J&B Enterprises, but it is sampled at the off-site receiving facility using a clean scoop and/or drill in order to determine the tin/lead ratio prior to smelting.

5. Frequency of Waste Analysis

Every drum of hazardous waste entering the facility is visually examined, sampled, and tested to determine pH in-house; except for the solder dross containers which are visually examined in-house, but are sampled and tested at the receiving facility. In addition, a sample from every drum of precious metal containing liquid hazardous waste is also analyzed off-site for precious metal content and specific gravity.

Selected waste samples are also sent to a DTSC certified hazardous waste testing lab as described below:

At least two samples will be collected annually from the aqueous solutions with cyanide and precious metals waste group (Waste # 1). These samples will include at least one cyanide plating solution and one cyanide strip solution, and the two samples will not be collected from waste that is generated by the same client.

At least two samples will be collected annually from the following waste groups; non-cyanide containing precious metal solutions, non-acidic (Waste # 2); iodine etch solutions (Waste # 3); residues containing precious metals (Waste # 4); and non-reactive dragout solutions (Waste # 13). The samples in each of the waste groups will be collected from different generators.

At least one sample will be collected annually from the following waste groups; solder dross (Waste # 5), and photographic solutions with silver (Waste # 6).

The scheduling of the types of wastes and particular drums to be sampled will be performed at the discretion of the facility operator. Additional waste samples will be sent to a DTSC certified hazardous waste testing lab under any of the following conditions:

Unusual appearance
Unusual odor
Unusual pH or specific gravity
No measurable precious metal content
Processing problems

6. Quality Assurance/Quality Control Program

In-house lab determinations are verified by sending duplicate samples to a DTSC approved testing lab on the schedule listed above. All additional Quality Assurance/Quality Control program items are specified by EPA approved testing procedures, and is conducted in accordance with the DTSC certified hazardous waste testing lab.

7. Methods Used to Ensure Compatibility of Wastes

All incoming waste solutions are subjected to pH testing in order to verify material compatibility, and help prevent the generation of hydrogen cyanide gas through the inadvertent mixing of acid and cyanide containing solutions. Any mildly acidic precious metal plating solutions will be manually pH adjusted prior to storage. Corrosive acid solutions are not accepted at the facility.

8. Waste Analysis Plan Review/Revision Procedures

The facility waste analysis plan will be reviewed whenever there is a significant change in operations, applicable regulations, or annually, whichever occurs sooner. In addition, increased processing problems will also require revisions to this plan. The facility operator will be responsible for amendments and updating of the plan.

9. Sampling Method

a. *Purpose*

To obtain a hazardous waste sample for use in the in-house visual examination, pH determination, or cyanide tests (if applicable) and for off-site analysis for precious metal and specific gravity, or for testing at a DTSC certified hazardous waste testing lab.

b. *Who may perform*

These tests may be only be conducted by authorized staff.

c. *Procedure*

Wearing the appropriate protective gear as described below, manually agitate the liquid hazardous waste container to provide an even mixing by using a clean sampling tube, pipette, or stirring rod. Immediately collect a sample from near the middle of the container, using either a clean polypropylene drum sampling tube or a pipette and bulb. Transfer the solution to a clean plastic sample bottle, which has previously been rinsed in the waste solution that is being sampled. Hazardous waste solutions must not be pipetted by mouth, and all hazardous waste sampling equipment will be thoroughly rinsed and decontaminated immediately after use.

Samples of solid hazardous wastes, such as plating bath filters or wipes, are collected by hand (protective gloves required!) and transferred to clean wide-mouth glass sample bottles, or heavy-duty sealable, plastic bags.

d. *Precautions to take while collecting hazardous waste sample*

Authorized work clothes, protective gloves, and goggles or splash shield are required. Personnel must be trained and familiar with the appropriate emergency actions for exposure to cyanide as described in the Material Safety Data Sheet, Emergency Response Plan, and Hazard Communication Program. Avoid all skin or eye contact and ingestion, and wash immediately after exposure or use.

e. *Field test for pH and Cyanide*

CAUTION: Extreme care must be used whenever working with any solution that MAY contain cyanide. Authorized work clothes, protective gloves, and goggles or splash shield are required. The designated respirator must be on hand. Personnel must be familiar with the appropriate emergency actions for exposure to cyanide as described in the Material Safety Data Sheet, Emergency Response Plan[2], Hazard Communication Program, and Waste Processing Procedures.

Following the correct sampling method described above, obtain a small waste sample and then:

(1) Determine the pH of the sample by using pH paper and comparing result to color guide, or by using a portable pH meter. If using a portable pH meter check the calibration and adjust as necessary. The calibration must be checked with two buffer solutions at a minimum.

(2) If appropriate, test the solution in-house for the presence of cyanides following the procedures outlined in the portable Hach test kit for cyanide determinations in liquid samples. A review of these procedures follows:

J&B Enterprises uses the cyanide test kit, range 0-0.3 mg/L, Model CYN-3, manufactured by the HACH Company. Directions are as follows:

WARNING!: The chemicals in this kit may be hazardous to the health and safety of the user if inappropriately handled. You must read all warnings before performing the tests and use appropriate safety equipment. Always review the directions in the kit prior to use.

(a) If the water sample is turbid, filter it before testing as follows: place a piece of folded filter paper in the funnel and set it on top of the square mixing bottle. Pour the sample on the filter paper and allow enough to pass through to fill the square bottle to the shoulder.

(b) Add the contents of one HexaVer Powder Pillow and swirl to mix.

(c) Add the contents of one CV (CyaniVer™) 3 Cyanide Reagent Powder Pillow. Swirl to mix and let stand for one minute.

(d) Add the contents of one CV 4 Cyanide Reagent Powder Pillow. Swirl to mix and proceed immediately to Step 17.2.5

(e) Swirl to mix and dissolve. If cyanide is present, a pink color will develop and turn blue in a few minutes. Allow at least 20 minutes, but not more than 26 minutes, for the color to develop. See Note (1)

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[2] Note: The facility is equipped with two portable gas meters, BW GasAlert Model GA-2, E-131021HCN Meter for detection of HCN gas for use in emergency and for testing any enclosed space or container if necessary.

(f) Fill a color viewing tube to the 5-mL mark with the prepared sample and place it in the right opening in the comparator.

(g) Fill the other color viewing tube to the 5-mL mark with clear water and place it in the left opening in the comparator.

(h) Hold the comparator up to an indirect light source and rotate the color disc until a match is obtained. Read the mg/L cyanide (CN) through the scale window.

NOTE: (1) Twenty minutes is required for complete color development at 25 degree C. If the sample is cold, a longer time will be required; if warm, a shorter time. Read the sample when a pure blue color has developed. A red to purple color indicates incomplete color development. A blue-green color implies the color has developed past the point of taking an accurate reading.

NOTE: (2) This procedure registers only free cyanide and not complexed cyanides. If a total cyanide value is required, i.e., value for free and complexed cyanide (copper, cobalt, iron, nickel, etc.), an acid distillation must be performed prior to analysis.

C. PARAMETERS OF WASTE ANALYSIS PLAN FOR ON-SITE GENERATED HAZARDOUS WASTES

1. Analysis of waste generated on-site is conducted for the following reasons:

a. To help prevent potentially hazardous chemical interactions through identification of incompatible acid and cyanide containing materials.

b. To determine the precious metal content and net worth of each load generated.

c. To ensure that the hazardous properties of the on-site generated waste materials are properly identified and containers properly labeled.

2. Selection of waste analysis parameters

Waste sampling and analysis is performed for two different purposes - to verify contents and determine the precious metal content and net value of each load of strip solution generated on-site (Type A Analyses), and to help ensure regulatory compliance and a safe and healthy workplace, by preventing hazardous chemical interactions (Type B Analyses). All of the Type B analyses are performed at an outside DTSC certified hazardous waste testing lab.

Cyanide Strip Solution
Type A: Precious Metals (gold, silver, etc. as appropriate) (off-site), pH
Type B: pH, Cyanide, 17 CAM heavy metals - Analysis will quantify the acute toxicity and reactivity potential, corrosion hazard, and the concentrations of the environmentally persistent and bioaccumulative substances.

Precious Metal Precipitate
Type A: Precious Metals (gold, silver, etc. as appropriate) (off-site)
Type B: 17 CAM heavy metals - Analysis will quantify the acute toxicity and reactivity potential, corrosion hazard, and concentrations of the environmentally persistent and bioaccumulative substances.

Precious Metal Precipitation Supernatant (Lean Liquor)/Water Wash
Type A: pH, Precious Metals (gold, silver, etc. as appropriate) (off-site)
Type B: pH, Cyanide, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Nickel, Lead, Silver, Thallium, and Zinc - Analysis will quantify the acute toxicity and reactivity potential, corrosion hazard, and concentrations of the environmentally persistent and bioaccumulative substances.

Acid Purification Solution (Nitric and/or Hydrochloric)
Type A: pH
Type B: pH, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Nickel, Lead, Silver, Thallium, and Zinc - Analysis will quantify the corrosives hazard, and concentrations of the environmentally persistent and bioaccumulative substances present.

Neutralized Acid Purification Solution
Type A: pH
Type B: pH, Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Nickel, Lead, Silver, Thallium, and Zinc - Analysis will quantify the corrosives hazard, and concentrations of the environmentally persistent and bioaccumulative substances present.

Evaporator Solids
Type A: Precious Metals (gold, silver, etc. as appropriate) (Sampling/analysis off-site)
Type B: Cyanide, pH,17 CAM heavy metals - Analysis will quantify the acute toxicity and reactivity potential, corrosion hazard, and concentrations of the environmentally persistent and bioaccumulative substances.

3. Waste Analysis Methods
All Type B analyses will be performed via the following EPA approved procedures, utilizing normal detection limits, except as determined necessary by the certified testing lab:

Parameter	**EPA Method #**	**Typical detection limit(s)**[3]
pH	150.1[a]/3045[b]/9040[b]/9045[b]	Not Applicable
Cyanide (Total)	335.2a/9010[b]	0.04 mg/L liquids, 1.2 mg/L solids
Antimony	200.7a/6010b/7040b	2 mg/L liquids,10 mg/kg solids
Arsenic	206.2[a]/206.3[a]/6010[b]/7060[b]	0.1 mg/L liquids, 1 mg/kg solids
Barium	200.7[a]/6010[b]/7080[b]	0.5 mg/L liquids, 2.0 mg/kg solids
Beryllium	200.7[a]/6010[b]/7090[b]	0.2 mg/L liquids, 2.0 mg/kg solids
Cadmium	200.7[a]/6010[b]/7130[b]	0.02 mg/L liquids, 2.0 mg/kg solids
Chromium (VI)	218.4[a]/218.5[a]/7197[b]	0.05 mg/L liquids, 2.0 mg/kg solids
Chromium (Total)	200.7[a]/6010[b]/7190[b]	0.03 mg/L liquids, 2.0 mg/kg solids
Cobalt	200.7[a]/6010[b]/7200[b]	0.05 mg/L liquids, 5.0 mg/kg solids
Copper	200.7[a]/6010[b]/7210[b]	0.03 mg/L liquids, 2.0 mg/kg solids

3 Some of the actual lab detection limits will be higher than the numbers listed in this table due to the sample dilution effect.

Lead	239.2[a]/6010[b]/7420[b]/7421[b]	0.05 mg/L liquids, 1.0 mg/kg solids, 20 mg/kg dross (dilution effect)
Mercury	245.1[a]/245.2[a]/6010[b]/ 7470[b]/7471[b]	0.002 mg/L liquids, 0.1 mg/kg solid
Molybdenum	239.2[a]/6010[b]/7480[b]	0.5 mg/L liquids, 5.0 mg/kg solids
Nickel	239.2[a]/6010[b]/7520[b]	0.05 mg/L liquids, 5.0 mg/kg solids
Palladium	253.2[a]/6010[b]	0.05 mg/L liquids, 5.0 mg/kg solids
Platinum	255.2[a]/6010[b]	0.02 mg/L liquids, 2.0 mg/kg solids
Selenium	270.2[a]/270.3[a]/6010[b]/ 7740[b]	0.05 mg/L liquids, 2.0 mg/kg solids
Silver	239.2[a]/6010[b]/7760[b]	0.02 mg/L liquids, 2.0 mg/kg solids
Thallium	239.2[a]/6010[b]/7840[b]	0.2 mg/L liquids, 20.0 mg/kg solids
Vanadium	239.2[a]/6010[b]/7910[b]	0.5 mg/L liquids, 5.0 mg/kg solids
Zinc	239.2[a]/6010[b]/7950[b]	0.05 mg/L liquids, 20.0 mg/kg solids

[a] US EPA 600/4-79-020/Methods for Chemical Analysis of Water and Waste
[b] US EPA SW-846/Test Methods for Evaluation of Solid Waste

4. Sampling Method

Samples of the on-site generated hazardous materials and wastes are collected as described below.

a. *Cyanide Strip Solution*

A representative sample is collected from the strip tank immediately after each load of scrap components has been processed in order to verify precious metal content and monitor pH. Only trained employees may collect the waste samples, and they must wear the authorized safety equipment, including the use of approved work clothes, gloves, and goggles or a splash shield. In addition, facility personnel have all been trained in the hazards of cyanide containing materials and the appropriate procedures to be followed in the event of an emergency or chemical spill. The sample is collected by dipping a clean plastic sample bottle directly into the strip solution, being careful not to let the solution rise over the top of the work gloves. The dip samples are representative of the strip solution since the solution is constantly agitated during processing by the rotation of the parts tumbler. Each sample bottle is clearly identified and sent to an off-site lab for precious metal analysis.

In addition, a composite sample of the strip solution is sent to a DTSC certified hazardous waste testing lab on at least an annual basis. This sample is collected by manually compositing 10 - 15 of the grab samples collected above. The employee doing the waste compositing must wear the authorized safety equipment as described above.

b. *Precious Metal Precipitate*
A sample of the precious metal precipitate is collected for off-site lab analysis by manually removing a 20 to 40 gram sample of the waste using a clean scoop, and then transferring the material to a clean open-top glass sample bottle with screw cap. Only trained employees may collect the waste samples, and they must wear the authorized safety equipment, including approved work clothes and gloves. Facility personnel have all been trained in the hazards of the materials in use at the facility and the appropriate procedures to be followed in the event of an emergency.

c. *Precious Metal Precipitation Supernatant (Lean Liquor)/Water Wash*
Samples are collected for in-house analysis immediately after generation of the lean liquor and water wash solutions. Only trained employees may collect the waste samples and they must wear the authorized safety equipment, including approved work clothes, gloves, and goggles or a splash shield. In addition, facility personnel have all been trained in the hazards of cyanide containing materials and of their chemical incompatibility with acidic materials; as well as of the appropriate procedures to be followed in the event of an emergency or chemical spill. The sample is collected by manually agitating the solution, and using a clean pipette and sampling bulb to remove sufficient sample volume to perform the in-house pH determination. Solutions are transferred to a clean glass beaker or flask from the pipette for in-house analysis. A second sample is collected at this time in the same manner, and is sent to an off-site lab for precious metal determination.

A sample of the precious metal precipitation supernatant (lean liquor)/water wash is sent to a DTSC certified hazardous waste testing lab on at least an annual basis. This sample is collected in the same manner as the sample collected above for in-house pH analysis, except that the waste sample is transferred to a clean plastic sample bottle and the sample size is approximately 275 - 300 ml. The employee collecting the waste sample must wear the authorized safety equipment as described above.

d. *Waste Acid Solution*
Samples are collected for in-house analysis immediately after generation of the acid solution and periodically during the pH neutralization process. Only trained employees may collect the waste samples and they must wear the authorized safety equipment, including approved work clothes, gloves, and goggles or a splash shield. Facility personnel have all been trained in the hazards of nitric acid and of its chemical incompatibility with cyanide containing materials, as well as of the appropriate procedures to be followed in the event of an emergency or chemical spill. The sample is collected by manually agitating the solution in the five-gallon container, and using a clean pipette and sampling bulb to remove sufficient sample volume to perform the in-house pH determination. Solutions are transferred to a clean glass beaker or flask from the pipette for in-house analysis.

A sample of the spent acid solution (prior to pH neutralization) is sent to a DTSC certified hazardous waste testing lab on at least an annual basis. This sample is collected in the same

manner as the sample collected above for in-house pH analysis, except that the waste sample is transferred to a clean plastic sample bottle and the sample size is approximately 275 - 300 ml. The employee collecting the waste sample must wear the authorized safety equipment as described above.

e. *Neutralized Acid Purification Solution*

Samples are collected for in-house analysis periodically during the pH neutralization process. Only trained employees may collect the waste samples and they must wear the authorized safety equipment, including approved work clothes, gloves, and goggles or a splash shield. Facility personnel have all been trained in the hazards of cyanide containing materials and of their chemical incompatibility with acidic materials, as well as of the appropriate procedures to be followed in the event of an emergency or chemical spill. The sample is collected by manually agitating the solution in the five gallon container using a clean pipette and sampling bulb to remove sufficient sample volume to perform the in-house pH determination. Solutions are transferred to a clean glass beaker or flask from the pipette for in-house analysis.

A sample of the neutralized acid solution (subsequent to pH neutralization) is sent to a DTSC certified hazardous waste testing lab on at least an annual basis. This sample is collected in the same manner as the sample collected above for in-house pH analysis, except that the waste sample is transferred to a clean plastic sample bottle and the sample size is approximately 275 - 300 ml. The employee collecting the waste sample must wear the authorized safety equipment as described above.

f. *Evaporator Solids*

A sample is collected from each load of evaporator solid materials off-site at the reclamation facility. This sample is collected in order to determine the precious metal content and net worth of the solids by performing a test melt.

In addition, a sample of the evaporator solid materials is collected and sent to a DTSC certified hazardous waste testing lab on at least an annual basis. This sample is collected by manually removing a two to three pound sample of the solid waste using a clean scoop, with the sample to be collected from several locations within the container. The material is then transferred to a clean open-top glass sample bottle with screw cap. Only trained employees may collect the waste samples and they must wear the authorized safety equipment, including approved work clothes, gloves, and goggles or a splash shield. Facility personnel have all been trained in the hazards of cyanide containing materials and the appropriate procedures to be followed in the event of an emergency.

5. <u>Frequency of Waste Analysis</u>

a. *Strip Solution*

A representative sample is collected for in-house pH analysis and off-site precious metals determinations, immediately after each load of scrap components has been processed in the strip tank.

In addition, a composite sample of the strip solution is sent to a DTSC certified hazardous waste testing lab on at least an annual basis. This sample is collected by manually compositing 10 - 15 of the grab samples collected above. This annual sample is collected at the discretion of the facility operator. Additional samples will be collected and sent to a DTSC certified hazardous waste testing lab for the reasons specified below:

Unusual appearance
Unusual odor
Unusual pH
No measurable precious metal content
Processing problems

b. *Precious Metal Precipitate*

Samples of the precious metal precipitate are not routinely collected during periods of normal processing, as in-house lab data on this processing intermediate is not required. Samples of each load of the final product (either gold or other precious metal) are sent to an off-site lab to determine purity. Samples are also collected of the solid by-product from the precious metal recovery operation (the evaporator solids) and from each of the waste streams that are influent to the precious metal precipitation process, as described above or as described elsewhere in this plan.

A sample of the precious metal precipitate will be collected and sent to a DTSC certified hazardous waste testing lab on at least an annual basis. Copies of the furnace feedstock lab analyses must be submitted to the DTSC annually. Additional samples will be collected and sent to a DTSC certified hazardous waste testing lab for the reasons specified below:

Unusual appearance
Unusual odor
Processing problems

Or if there is a noticeable and significant change in chemical composition of evaporator solids or finished precious metal product.

c. *Lean Liquor/Water Wash*

A representative sample of each load of the lean liquor and water wash are collected for in-house pH analysis immediately after generation of the water wash solution. These waste samples are added back into their original container immediately after analysis and are processed along with the remainder of the solution. A representative sample of the lean liquor is also collected from each load for off-site precious metal analysis in order to verify that the precipitation has been complete.

A sample of the lean liquor/water wash waste is collected and sent to a DTSC certified hazardous waste testing lab on at least an annual basis. Additional samples will be collected and sent to a DTSC certified hazardous waste testing lab for the following reasons:

Unusual appearance
Unusual odor
Unusual pH
Processing problems

d. *Acid Purification Solution*

A representative sample is collected for in-house pH analysis after generation of the waste acid solution. All waste samples collected are added back into the five gallon glass container immediately after analysis and are processed along with the remainder of the solution.

A sample of the waste acid solution (prior to pH neutralization) is collected and sent to a DTSC certified hazardous waste testing lab on at least an annual basis. Additional samples will be collected and sent to a DTSC certified hazardous waste testing lab for the reasons specified below:

Unusual appearance
Unusual odor
Unusual pH
Processing problems

e. *Neutralized Acid Purification Solution*

Representative samples are collected for in-house pH analysis during the neutralization process. All waste samples collected are added back into their original container immediately after analysis and are processed along with the remainder of the solution.

A sample of the neutralized acid solution is collected immediately after neutralization has been completed and sent to a DTSC certified hazardous waste testing lab on at least an annual basis. Additional samples will be collected and sent to a DTSC certified hazardous waste testing lab for the reasons specified below:

Unusual appearance
Unusual odor
Unusual pH
Processing problems

f. *Evaporator Solids*

A sample is collected from each load of evaporator solid materials at the off-site reclamation facility.

A sample of the evaporator solid materials is collected in-house and sent to a DTSC certified hazardous waste testing lab on at least an annual basis. Additional samples of the evaporator solids will be collected and sent to a DTSC certified hazardous waste testing lab for the following reasons:

Unusual appearance
Unusual odor
Unusual pH
Processing problems

6. Methods Used to Ensure Compatibility of Wastes

All on-site generated waste solutions are subjected to pH testing in order to help prevent the generation of hydrogen cyanide gas. This pH testing is performed immediately after generation, and again prior to any mixing operations. Employees have been instructed not to mix acid and cyanide containing solutions.

The on-site generated spent acid solution is neutralized immediately after generation, in order to help prevent a hazardous chemical interaction. This solution is not combined with the alkaline cyanide containing solution in the evaporator until after in-house analysis demonstrates that the solution has been adjusted to a pH of between 8 and 10.

The pH of the strip solution is also checked on a daily basis and after each load, in order to ensure that the solution remains alkaline, as required.

7. Waste Analysis Plan Review/Revision Procedures

The facility waste analysis plan will be reviewed whenever there is a significant change in operations, applicable regulations, or annually, whichever occurs sooner. In addition, increased processing problems will also require revisions to this plan. The facility operator will be responsible for amendments and updating of the plan.

D. QUALITY ASSURANCE AND CONTROL MEASURES

1. Procedures to Assure Approved Wastes Are Received and Treated

Procedures to assure that only waste approved in the Standardized Permit is received and processed at the facility.

J&B Enterprises requires each generator to complete a Waste Profile form that describes the material to be processed at the J&B facility. Wastes are not accepted at the facility, or scheduled for pick-up, if a certified, approved waste profile is not on file for that material. Waste Profiles are only accepted and certified by the facility for those wastes that are specified in the Standardized Permit.

In the event that a customer calls to schedule a waste pick-up, or an unscheduled vehicle arrives at the facility, the following procedures are followed:

a. The Office Manager, or other designated employee, must get a description of the waste to be picked up. If a certified Waste Profile is on file for that client and material, the waste is scheduled for pick-up. Alternatively, a Waste Profile must be submitted and certified by J&B for acceptance or by another facility selected to handle the waste.

b. The J&B Enterprises driver collecting the waste must examine the hazardous waste containers, Uniform Hazardous Waste Manifest, and certified Waste Profile at the time of pick-

up to ensure that the wastes are properly packaged for transportation; and that they are of a type that is acceptable at the facility and that all labeling is in agreement.

c. Upon receipt of the waste at J&B, the employee receiving the waste for the facility must examine the containers, Uniform Hazardous Waste Manifest, and certified Waste Profile to ensure that the wastes are of a type that is acceptable at the facility, and that all labeling agrees. Wastes that have not been specifically accepted prior to this time must be rejected.

d. A representative sample is collected from each waste container. The pH of the waste is determined via pH paper or meter and recorded in the Operating Log. If the appearance, odor, and pH of the sample matches the reference values in the Waste Profile, that container is accepted, weighed, and transferred to the appropriate section of the facility to await processing. If the visual examination or pH determination leaves any question as to waste identity or compatibility, a field test for cyanide may be conducted; or a sample of the waste may be sent off-site for analysis at a DTSC certified testing lab.

e. As an alternative to the above-described procedures, any solid hazardous waste that is received at the facility is subjected to a visual examination. If a question as to waste identity exists, the pH of a waste extract will be determined. If the solid hazardous waste is acceptable, it is weighed, entered into the Operating Log, and transferred to the appropriate section of the facility.

f. Additional waste samples will be sent off-site for analysis at a DTSC certified testing lab in the event that unexpected problems are encountered at the facility while processing the waste.

2. <u>Procedures to Determine if Wastes or Analytical Needs Have Changed</u>

Each customer is asked to review his or her certified Waste Profile sheets on an annual basis in order to help ensure that the material has not changed. If the waste is found to have changed significantly, a new waste profile will be prepared and certified (assuming of course the waste is of a type that can still be accepted at the facility).

If there any changes to the wastes being handled at the facility, the operator will review the Waste Analysis Plan to ensure that it is still accurate. If any changes were uncovered that would require the modification of the Waste Analysis Plan, the Department will be notified.

ATTACHMENTS

Tables

Table 1	Not Included – Household Wastes are not handled at this facility
Table 2	Descriptions of Hazardous Wastes
Table 3	Physical Properties of Hazardous Wastes
Table 4	Hazardous Properties of Wastes
Table 5	Sampling and Analyses of Wastes
Table 6	Treatment Standards
Table 7	Hazardous Waste Profile Form and LDR Land Ban Notifications

Process Flow Schematics

Note: These attachments have been moved to Section II

SECTION III – TABLE 2 - DESCRIPTION OF HAZARDOUS WASTE

Table 2, pages 1 – 4, May 2011

Note: In order to have a more complete table, some minor changes have been made to reflect some secondary waste codes. These new codes, both Federal and California, are in italics and represent rare or occasional wastes that the facility may handle.

J&B ENTERPRISES - TABLE 2 - DESCRIPTION OF WASTE

WASTE STREAM #	WASTE STREAM NAME	US EPA WASTE CODES	CALIF. WASTE CODES	DESCRIPTION OF WASTE	PROCESS GENERATING WASTE
		OFF-SITE GENERATED WASTES			
Rvsd. 5.11 - changes italized - indicating secondary waste codes					
1 (off-site)	Aqueous Sol'n with Cyanide and Precious Metals	F007, F009, D002, D003, D004, D006, D007, D008, D011 *F006, F008*	121, 131, 132, 141, 551, 711, 722, 724, 726, 728 *122, 123, 134, 135*	Precious metals bearing, spent plating, stripping, coating, and etching solutions with cyanide	Electronics/jewlery industries; plating, stripping, coating, and etching operations
2 (off-site)	Non-reactive Dragout Solutions w/Precious Metals	F007 *F008, F009*	123, 131, 132, 135 *121*	Dragout rinsewater solutions with trace precious metals and cyanide	Electronics/jewlery industries; rinsing for plating, stripping, and etching operations and etching operations
3 (off-site)	Non-Cyanide Containing Precious Metal Solutions (non-acidic)	Non-RCRA or D002, D004, D006, D007 D008, D010, D011 *D009, D010*	123, 131, 132, 135 141, 551, 721, 722 724, 726, 728 *121, 122, 171, 331 342, 343, 491, 541*	Precious metals bearing, spent plating solutions with no cyanide.	Electronics/jewlery industries; plating operations, using non-cyanide based solutions
4 (off-site)	Iodine etch solutions	Non-RCRA	131, 132, 135, 141, 551, 726 *121, 122, 123, 133 134, 331, 342 343, 491*	Iodine-potassium iodide based aqueous etch solution with gold	Electronics/jewlery industries; gold etching.
5 (off-site)	Residues Containing Precious Metals	F006, F007, F008, F009, D002, D003, D004, D006, D007, D008, D011 *D009, D010*	141, 171, 181, 491, 512, 513 *331, 342, 343, 551*	Spent filters, wipes, resins, sludges, empty containers, and other solid waste w/precious metals	Electronics industries; plating treatment, and clean-up operations
6 (off-site)	Solder dross	D004, D006, D008, and/or D011	141, 171, 172, 181 *491*	Solid hazardous waste with tin and lead.	Electronics assembly, soldering operations
7 (off-site)	Photographic Solutions w/Silver	D007, D011	541 *123, 131, 133, 134 135, 141, 331, 342 343, 491, 512, 513*	Spent photoprocessing sol'ns. with silver.	Photo processing operations

J&B Enterprises - Table 2 - Description of Waste (continued)

WASTE STREAM #	WASTE STREAM NAME	US EPA WASTE CODES	CALIF. WASTE CODES	DESCRIPTION OF WASTE	PROCESS GENERATING WASTE
		ON-SITE GENERATED WASTES			
8 (On-site) *and* (Off-site)	Cyanide strip solution (on-site) (Note: Occasonally some off-site generated strip solution is received.)	D002, D003, D004, D006, D007, D008, D011 *D009, D010, F009*	121, 131, 132, 711, 721, 722, 724, 726, 728 *122, 123, 133, 134 135, 331, 342, 343 491*	Spent cyanide-based strip solution w/precious metals	On-site precious metals recovery operations; stripping
9 (On-site)	Precious metal precipitate ("mud")	F007, F009, D004, D006, D007, D008, D011	171 *121, 122, 131, 132 133, 134, 342, 343 491*	Precious metals containing treatment precipitate (mud) w/heavy metals	On-site precious metals recovery operations; precipitation
10 (On-site)	Precious metal precipitation supernatant/Water wash (Lean liquor)	F007, F009, D002, D003, D004, D006, D007, D008, D011	121, 131, 132, 711, 721, 722, 724, 726, 728 *122, 133, 134 342, 343, 491*	Aqueous solution with cyanide and heavy metals	On-site precious metals recovery operations; precipitation - lean liquor
11 (On-site)	Acid purification solution	F007, F009, D002, D004, D006, D007, D008, D011 *D009, F008*	721, 722, 724, 726, 728, and/or 792 *131, 132, 135 135, 171, 181*	Inorganic acid solution with heavy metals	On-site precious metals recovery operations; precious metals purification

12 (On-site)	Neutralized acid solution	F007, F009, D004, D006, D007, D008, D011	132, 721, 722, 724, 726, 728 *121, 135, 171* *181*	Aqueous solution with heavy metals	On-site precious metals recovery operations; pH neutralization
13 (On-site)	Wastewater-sludge without cyanide	F006, F007, F009, D004, D006, D007, D008, and/or D011	132, 721, 722, 724, 726, and/or 728	Aqueous solution with heavy metals	On-site precious metals recovery operations; cyanide destruction
14 (On-site)	Filter cake	F006, F007, F009, D002, D004, D006, D007, D008, D010, and/or D011	171 and/or 181	Wastewater filter cake metal sulfide solids	On-site precious metals recovery operations; effluent filtration
15 (On-site)	Nonhazardous wastewater effluent	Non-RCRA	NonHazardous	Wastewater effluent with nonhazardous levels of heavy metals	On-site precious metals recovery operations; liquid effluent discharge

J&B Enterprises - Table 2 - Description of Waste (continued)

WASTE STREAM #	WASTE STREAM NAME	US EPA WASTE CODES	CALIF. WASTE CODES	DESCRIPTION OF WASTE	PROCESS GENERATING WASTE
		ON-SITE GENERATED WASTES			
16	Resin regenerant solution, acidic	F007, F009, D002, D004, D006, D007, D008, and/or D011	132, 721, 722, 724, 726, 728, and/or 792	Acidic aqueous solution with heavy metals	On-site precious metals recovery operations; wastewater treatment/resin regeneration
17	Resin regenerant solution, caustic	F007, F009, D002	122	Caustic aqueous solution	On-site precious metals recovery operations; wastewater treatment/resin regeneration
18	Spent ion exchange resin	F007, F009, D002, D004, D006, D007, D008, and/or D011	181 and/or 272	Spent polymeric resin with heavy metals	On-site precious metals recovery operations; wastewater treatment/ion exchange
19	Resin regenerant solution, neutralized	F007, F009, D004, D006, D007, D008, and/or D011	132, 721, 722, 724, 726, and/or 728	Aqueous solution with heavy metals	On-site precious metals recovery operations; wastewater treatment/resin regeneration
20	Evaporator solids	F007, F009, D002, D003, D004, D006, D007, D008, D010 D011 *F006, F008*	171 and/or 181 *121*	Solid waste with cyanide and metals	On-site precious metals recovery operations; alternate waste treatment system

SECTION III – TABLE 3 – PHYSICAL PROPERTIES OF WASTE

Table 3, 1 page only, May 2011

J&B Enterprises - Table 3
PHYSICAL PROPERTIES OF WASTE

Rsvd. 5.11

WASTE STREAM #	WASTE STREAM NAME	TYPICAL SPECIFIC GRAVITY	TYPICAL pH RANGE	FLASH POINT
	OFF-SITE GENERATED WASTES			
1	Aqueous Sol'n with Cyanide and Precious Metals	1.05 - 1.15	4 - >13	None
2	Non-reactive Dragout Solutions w/Precious Metals	1.01 - 1.05	5 - 10	None
3	Non-Cyanide Containing Precious Metal Solutions (non-acidic)	1.05 - 1.1	6 - 9.5	None
4	Iodine Etch Solutions	1.05 - 1.15	4 - 6.5	None
5	Residues Containing Precious Metals (Liquid, Sludge, Solid)	0.25 avg.	4 - 9	paper/cotton
6	Solder Dross, Solid, some sludge an	8 avg.	5 - 11	None
7	Photographic Solutions w/Silver	1.05 - 1.2	4 - 10	>212 ∞F
	ON-SITE GENERATED WASTES			
8	Cyanide Strip Solution (on-site and occaasionally off-site)	1.05 - 1.08	11.5 - 13.5	None
9	Precious Metal Precipitate (Solid, Sludge, and Liquid)	1.5 - 2.5	8 - 11	None
10	Precious Metal Precipitate Supernatant/Water Wash aka Lean Liquor (Liquid and Sludge)	1.05 - 1.15	8 - 11	None
11	Acid Purification Solution	1.1 - 1.15	<1	None
12	Neutralized Acid Solution	1.15 - 1.3	9 - 12.4	None
13	Wastewater-sludge without Cyanide (Sludge, Solid)	1.05 - 1.2	8 - 11	None
14	Filter Cake (Solid)	1.2 - 1.7	9 - 11	None
15	Nonhazardous Wastewater Effluent (Liquid)	1.05 - 1.1	9-11	None
16	Resin Regenerate Solution, Acidic	1.05 - 1.2	<1	None
17	Resin Regenerate Solution, Alkaline (Caustic)	1.05 - 1.2	>12.5	None
18	Spent Ion Exchange Resin (Solid)	1.05 - 1.2	6 - 11	None
19	Resin Regenerate Solution, Neutral pH or non-corrosive	1.05 - 1.2	8 - 11	None
20	Evaporator Solids (Solid, occasionaly Sludge)	0.7 to 0.9	9 - 13.5	None

SECTION III – TABLE 4 - HAZARDOUS PROPERTIES OF WASTE (OFF-SITE AND ON-SITE GENERATED)

Table 4, 7 pages, May 2011

J&B ENTERPRISES - TABLE 4 - HAZARDOUS PROPERTIES OF WASTE - OFF-SITE GENERATED *Rsvd. 5.11*

WASTE STREAM #	WASTE STREAM NAME	POTENTIAL HAZARDOUS CONSTITUENTS	IGNITABILITY 22 CCR 66261.21	CORROSIVE 22 CCR 66261.22	REACTIVITY 22 CCR 66261.23	TOXICITY 22 CCR 66261.24	INCOMPATIBILITY W/OTHER WASTE STREAMS/CNTRS.
1	Aqueous Sol'n with Cyanide & Precious Metals	Cyanide Sodium Hydroxide Antimony Arsenic Cadmium Chromium Copper Lead Nickel Palladium Platinum Silver Thallium Zinc	None	Some wastes in this group are corrosive alkaline materials with pH >12.5	Can generate dangerous levels of toxic gas when exposed to a pH around 2.	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Acid waste (on-site generated) wastes #11, 16
2	Non-reactive Dragout Solutions	Cyanide Copper Lead Nickel Silver Zinc	None	None	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Acid waste (on-site generated) waste #11, 16 Non-reactive though, per 40 CFR261.33
3	Non-Cyanide Containing Precious Metal Solutions	Sodium Hydroxide Antimony Arsenic Cadmium Chromium Copper Lead Nickel Palladium Platinum Selenium Silver Thallium Zinc	None	Some wastes in this group are corrosive alkaline materials with pH >12.5	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	None

J&B ENTERPRISES - TABLE 4 - HAZARDOUS PROPERTIES OF WASTE - OFF-SITE GENERATED *Rsvd. 5.11*

WASTE STREAM #	WASTE STREAM NAME	POTENTIAL HAZARDOUS CONSTITUENTS	IGNITABILITY 22 CCR 66261.21	CORROSIVE 22 CCR 66261.22	REACTIVITY 22 CCR 66261.23	TOXICITY 22 CCR 66261.24	INCOMPATIBILITY W/OTHER WASTE STREAMS/CNTRS.
4	Iodine etch solutions	Iodine-Potassium iodide	None	None Irritant material	None	None	None
5	Residues Containing Precious Metals	Sodium Hydroxide Cyanide Antimony Arsenic Cadmium Chromium Copper Lead Nickel Palladium Platinum Silver Thallium	None	Some wastes in this group are corrosive alkaline materials with pH for extracts of >12.5	Some of the wastes in this group can generate dangerous levels of toxic gas when exposed to a pH around 2.	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Acid waste (on-site generated) wastes #11, 16
6	Solder dross	Antimony Arsenic Cadmium Copper Lead Nickel Silver Zinc	None	None	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Acid waste (on-site generated) wastes #11, 16
7	Silver Fixer Solution	Chromium Silver Zinc	None	None	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	None

WASTE STREAM #	WASTE STREAM NAME	POTENTIAL HAZARDOUS CONSTITUENTS	IGNITABILITY 22 CCR 66261.21	CORROSIVE 22 CCR 66261.22	REACTIVITY 22 CCR 66261.23	TOXICITY 22 CCR 66261.24	INCOMPATIBILITY W/OTHER WASTE STREAMS/CNTRS.
8	Cyanide strip solution (on-site)	Cyanide Sodium Hydroxide Antimony Arsenic Beryllium Cadmium Chromium Cobalt Copper Lead Nickel Silver Thallium Zinc	None	Aqueous waste with pH >12.5	Can generate dangerous levels of toxic gas when exposed to a pH around 2.	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Acid waste (on-site generated) wastes #11, 16
9	Precious metal precipitate	Antimony Arsenic Beryllium Cadmium Chromium Copper Lead Nickel Silver Thallium Zinc	None	None	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Acid waste (on-site generated) wastes #11, 16
10	Precious metal precipitate supernatant & water wash	Cyanide Sodium Hydroxide Antimony Arsenic Beryllium Cadmium Copper Lead Nickel Silver Thallium Zinc	None	Some of the wastes in this group are corrosive alkaline materials with pH >12.5	Can generate dangerous levels of toxic gas when exposed to a pH around 2.	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Acid waste (on-site generated) wastes #11, 16

J&B ENTERPRISES - TABLE 4 - HAZARDOUS PROPERTIES OF WASTE - ON-SITE GENERATED

WASTE STREAM #	WASTE STREAM NAME	POTENTIAL HAZARDOUS CONSTITUENTS	IGNITABILITY 22 CCR 66261.21	CORROSIVE 22 CCR 66261.22	REACTIVITY 22 CCR 66261.23	TOXICITY 22 CCR 66261.24	INCOMPATIBILITY W/OTHER WASTE STREAMS/CNTRS.
11	Acid purification solution	Nitric acid Hydrochloric acid Antimony Arsenic Beryllium Cadmium Chromium Copper Lead Nickel Silver Thallium Zinc	None	Aqueous waste with pH <2	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Cyanide containing wastes wastes # 1, 2, 5, 6, 8, 9, 10, 14, and 20
12	Neutralized acid solution	Antimony Arsenic Beryllium Cadmium Chromium Copper Lead Nickel Silver Thallium Zinc	None	None	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	None

J&B ENTERPRISES - TABLE 4 - HAZARDOUS PROPERTIES OF WASTE - ON-SITE GENERATED *Rsvd. 5.11*

WASTE STREAM #	WASTE STREAM NAME	POTENTIAL HAZARDOUS CONSTITUENTS	IGNITABILITY 22 CCR 66261.21	CORROSIVE 22 CCR 66261.22	REACTIVITY 22 CCR 66261.23	TOXICITY 22 CCR 66261.24	INCOMPATIBILITY W/OTHER WASTE STREAMS/CNTRS.
13	Wastewater -sludge without cyanide	Sodium Hydroxide Antimony Arsenic Beryllium Cadmium Chromium Cobalt Copper Lead Nickel Silver Thallium Zinc	None	None	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Acid waste (on-site generated) wastes #11, 16
14	Filter cake Metal sulfides	Sodium Hydroxide Antimony Arsenic Beryllium Cadmium Chromium Cobalt Copper Lead Nickel Selenium Silver Thallium Zinc	None	None	None	Environmentally persistent and bioaccumulative. Exceeds standard in 22 CCR 66261.24.	Acid waste (on-site generated) wastes #11, 16
15	Nonhazardous wastewater effluent	None	None	None	None	None	None

WASTE STREAM #	WASTE STREAM NAME	POTENTIAL HAZARDOUS CONSTITUENTS	IGNITABILITY 22 CCR 66261.21	CORROSIVE 22 CCR 66261.22	REACTIVITY 22 CCR 66261.23	TOXICITY 22 CCR 66261.24	INCOMPATIBILITY W/OTHER WASTE STREAMS/CNTRS.
16	Resin regenerate solution, acidic	Inorganic Acid Antimony Arsenic Beryllium Cadmium Chromium Cobalt Copper Lead Nickel Selenium Silver Thallium Zinc	None	Aqueous waste with pH <2	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Cyanide and solid metal containing wastes wastes # 1, 2, 5, 6, 8, 9, 10, 14, and 20
17	Resin regenerate solution, caustic	Sodium Hydroxide	None	Aqueous waste with pH >12.5	None	None	None
18	Spent ion exchange resin	Antimony Arsenic Beryllium Cadmium Chromium Cobalt Copper Lead Nickel Selenium Silver Thallium Zinc	None	None	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	None

WASTE STREAM #	WASTE STREAM NAME	POTENTIAL HAZARDOUS CONSTITUENTS	IGNITABILITY 22 CCR 66261.21	CORROSIVE 22 CCR 66261.22	REACTIVITY 22 CCR 66261.23	TOXICITY 22 CCR 66261.24	INCOMPATIBILITY W/OTHER WASTE STREAMS/CNTRS.
19	Resin regenerate solution, neutralized	Antimony Arsenic Beryllium Cadmium Chromium Cobalt Copper Lead Nickel Selenium Silver Thallium Zinc	None	None	None	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	None
20	Evaporator solids	Cyanide Sodium Hydroxide Antimony Arsenic Beryllium Cadmium Chromium Cobalt Copper Lead Nickel Silver Thallium Zinc	None	Yes, some wastes of this type have pH >12.5	Yes	Environmentally persistent and bioaccumulative, may exceed one or more standards in 22 CCR 66261.24	Acid waste (on-site generated) wastes #11, 16

SECTION III – TABLE 5 – SAMPLING AND ANALYSES OF WASTES (OFF-SITE GENERATED)

Table 5, 40 pages total, May 2011

Note: There are twenty waste stream sheets in this section.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-1
1	**Aqueous solution with cyanide & precious metals**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Specific gravity	Volumetric	120
Precious metal	EPA 231.1, 231.2, or fire assay	10
Cyanide (T)	EPA 9010, 335.2, or equivalent	0.04
Antimony	EPA 6010, 7040, 200.7, or equivalent	2
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equivalent	0.1
Cadmium	EPA 6010, 7130, 200.7, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equivalent	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Thallium	EPA 6010, 7840, 239.2, or equivalent	0.2
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

3. Constituents Analyzed	6. Purpose of Analysis	7. Analysis Location
pH	Waste ID, Regulatory compliance - H&S monit.	Both
Specific gravity	Monetary evaluation	Off-site
Precious metal	Monetary evaluation	Off-site
Cyanide (T)	Regulatory compliance - H&S monit.	Off-site
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Waste container

Sample Type	9. Sampling Frequency
Waste identification samples	Check each container received for pH
Monetary evaluation samples	Per contract
Reg. compliance samples- Health & Safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.
B. All hazardous waste containers entering the facility are sampled immediately and are subjected to a visual examination. Additionally, this waste type is subjected to in-house pH testing to ensure proper identification.
C. Carefully open the hazardous waste container following the procedures authorized in the Employee Training Manual. Next, manually agitate the solution using a clean stirring rod, sampling tube, or pipette.
D. Immediately collect a grab sample from near the middle of the container using a drum sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!
F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each container of this waste type entering the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation. Acid wastes are not accepted at the facility! Also, each container of this waste type entering the facility must be sampled and analyzed to determine the precious metal content and thereby net worth, for accounting purposes. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual agitation, followed by grab sampling directly from the container using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least one sample per year of each waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-2
2	**Non-reactive Dragout solutions with precious metals**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Specific gravity	Volumetric	120
Precious metal	EPA 231.1, 231.2, or fire assay	10
Cyanide (T)	EPA 9010, 335.2, or equivalent	0.04
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equivalent	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste ID, Regulatory compliance - H&S monit.	Both
Specific gravity	Monetary evaluation	Off-site
Precious metal	Monetary evaluation	Off-site
Cyanide (T)	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Waste container

Sample Type	9. Sampling Frequency
Waste identification samples	Check each container received for pH
Monetary evaluation samples	Per contract
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.
B. All hazardous waste containers entering the facility are sampled immediately and are subjected to a visual examination. Additionally, this waste type is subjected to in-house pH testing to ensure proper identification.
C. Carefully open the hazardous waste container following the procedures authorized in the Employee Training Manual. Next, manually agitate the solution using a clean stirring rod, sampling tube, or pipette.
D. Immediately collect a grab sample from near the middle of the container using a drum sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!
F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each container of this waste type entering the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation. Acid wastes are not accepted! Also, each container of this waste type entering the facility must be sampled and analyzed to determine the precious metal content and thereby net worth, for accounting purposes. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual agitation, followed by grab sampling directly from the container using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least one sample per year of each waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-3
3	**Non-cyanide containing precious metal solution, non-acid**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Specific gravity	Volumetric	120
Precious metal	EPA 231.1, 231.2, or fire assay	10
Antimony	EPA 6010, 7040, 200.7, or equivalent	2
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equivalent	0.1
Cadmium	EPA 6010, 7130, 200.7, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equivalent	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Thallium	EPA 6010, 7840, 239.2, or equivalent	0.2
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste ID, Regulatory compliance - H&S monit.	Both
Specific gravity	Monetary evaluation	Off-site
Precious metal	Monetary evaluation	Off-site
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Waste container

Sample Type	9. Sampling Frequency
Waste identification samples	Check each container received for pH
Monetary evaluation samples	Per contract
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. All hazardous waste containers entering the facility are sampled immediately and are subjected to a visual examination. Additonally, this waste type is subjected to in-house pH testing to ensure proper identification.

C. Carefully open the hazardous waste container following the procedures authorized in the Employee Training Manual. Next, manually agitate the solution using a clean stirring rod, sampling tube, or pipette.

D. Immediately collect a grab sample from near the middle of the container using a drum sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!

F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each container of this waste type entering the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation. Acid wastes are not accepted! Also, each container of this waste type entering the facility must be sampled and analyzed to determine the precious metal content and thereby net worth, for accounting purposes. Due to the limited variation in waste content, annual samples are sufficeint for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual agitiation, followed by grab sampling directly from the container using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validty/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additonal QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least one sample per year of each waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliablity. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-4
4	**Iodine etch solutions**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Specific gravity	Volumetric	120
Precious metal	EPA 231.1, 231.2, or fire assay	10
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equivalent	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02

	6. Purpose of Analysis	7. Analysis Location
pH	Waste ID, Regulatory compliance - H&S monit.	Both
Specific gravity	Monetary evaluation	Off-site
Precious metal	Monetary evaluation	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Waste container

Sample Type	9. Sampling Frequency
Waste identification samples	Check each container received for pH
Monetary evaluation samples	Per contract
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.
B. All hazardous waste containers entering the facility are sampled immediately and are subjected to a visual examination. Additionally, this waste type is subjected to in-house pH testing to ensure proper identification.
C. Carefully open the hazardous waste container following the procedures authorized in the Employee Training Manual. Next, manually agitate the solution using a clean stirring rod, sampling tube, or pipette.
D. Immediately collect a grab sample from near the middle of the container using a drum sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!
F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each container of this waste type entering the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation. Acid wastes are not accepted! Also, each container of this waste type entering the facility must be sampled and analyzed to determine the precious metal content and thereby net worth, for accounting purposes. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual agitation, followed by grab sampling directly from the container using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least one sample per year of each waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-5
5	**Residues containing precious metals**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Cyanide (T)	EPA 9010, 335.2, or equivalent	1.2
Antimony	EPA 6010, 7040, 200.7, or equivalent	2.5
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equivalent	1
Cadmium	EPA 6010, 7130, 200.7, or equivalent	1
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	2
Copper	EPA 6010, 7210, 200.7, or equivalent	2
Lead	EPA 6010, 7420, 7421, 239.2, or equivalent	1
Nickel	EPA 6010, 7520, 239.2, or equivalent	2
Silver	EPA 6010, 7760, 239.2, or equivalent	2
Thallium	EPA 6010, 7840, 239.2, or equivalent	2.5
Zinc	EPA 6010, 7950, 239.2, or equivalent	2

	6. Purpose of Analysis	7. Analysis Location
pH	Waste identification/Regulatory compliance	Both
Cyanide (T)	Regulatory compliance - H&S monit.	Off-site
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Composite		Waste container

Sample Type	9. Sampling Frequency
Waste Identification samples	Only as needed
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. All hazardous waste containers entering the facility are sampled immediately and subjected to a visual examination.

C. Carefully open the hazardous waste container following the procedures authorized in the Employee Training Manual. Next, manually collect at least three distinctly different samples from several locations in the container.

D. Complete the visual examination of the waste, and, if necessary, transfer the samples to a clean plastic bag for off-site analysis.

12. Rationale for Questions 8 to 11

Each container of this waste type entering the facility must be subjected to a visual examination to ensure that only the authorized waste types are received. No acid wastes are accepted. If a question exists as to waste identity, an in-house pH or Cyanide test may be performed. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically not homogenous, several distinct samples will have to be manually collected from various locations within the container. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-6
6	**Solder dross**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	pH meter or paper	N/A
Antimony	EPA 6010, 7040, 200.7, or equivalent	2.5
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equivalent	1
Cadmium	EPA 6010, 7130, 200.7, or equivalent	2
Copper	EPA 6010, 7210, 200.7, or equivalent	1
Lead	EPA 6010, 7420, 7421, 239.2, or equivalent	20 (dilution effect)
Nickel	EPA 6010, 7520, 239.2, or equivalent	2
Silver	EPA 6010, 7760, 239.2, or equivalent	2
Zinc	EPA 6010, 7950, 239.2, or equivalent	2

	6. Purpose of Analysis	7. Analysis Location
pH	Waste Identification	On-site
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Composite		Waste container

Sample Type	9. Sampling Frequency
Waste identification samples	Only as needed
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. All hazardous waste containers entering the facility are sampled immediately and subjected to a visual examination.

C. Carefully open the hazardous waste container following the procedures authorized in the Employee Training Manual. Next, manually collect at least three distinctly different samples from several locations in the container.

D. Complete the visual examination of the waste, and, if necessary, transfer the samples to a clean plastic bag for off-site analysis.

12. Rationale for Questions 8 to 11

Each container of this waste type entering the facility must be subjected to a visual examination to ensure that only the authorized waste types are received. No acid wastes are accepted. If a question exists as to waste identity, an in-house pH test may be performed. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically not homogenous, several distinct samples will have to be manually collected from various locations within the container. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a an unusual odor, appearance, or pH.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-7
7	**Photographic solutions with silver**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste ID, Regulatory compliance - H&S monit.	Both
Silver	Monetary evaluation/Regulatory compliance	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Waste container

Sample Type	9. Sampling Frequency
Waste identification samples	Check each container received.
Monetary evaluation samples	Check each container received.
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.
B. All hazardous waste containers entering the facility are sampled immediately and are subjected to a visual examination. Additonally, this waste type is subjected to in-house pH testing to ensure proper identification.
C. Carefully open the hazardous waste container following the procedures authorized in the Employee Training Manual. Next, manually agitate the solution using a clean stirring rod, sampling tube, or pipette.
D. Immediately collect a grab sample from near the middle of the container using a drum sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!
F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each container of this waste type entering the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation. Acid wastes are not accepted! Also, each container of this waste type entering the facility must be sampled and analyzed to determine the precious metal content and thereby net worth, for accounting purposes. Due to the limited variation in waste content, annual samples are sufficeint for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual agitiation, followed by grab sampling directly from the container using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validty/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additonal QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least one sample per year of each waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliablity. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-8
8	**Cyanide strip solution (on-site)**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Precious metal	EPA 231.1, 231.2, or fire assay	10
Cyanide (T)	EPA 9010, 335.2, or equivalent	0.04
Antimony	EPA 6010, 7040, 200.7, or equivalent	2
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equivalent	0.1
Barium	EPA 6010, 7080, 200.7, or equivalent	0.5
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.2
Cadmium	EPA 6010, 7130, 200.7, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Cobalt	EPA 6010, 7200, 200.7, or equivalent	0.05
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equivalent	0.05
Mercury	EPA 7470, 7471, 245.1, 245.2, or equivalent	0.002
Molybdenum	EPA 6010, 7480, 239.2, or equivalent	0.5
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Selenium	EPA 6010, 7740, 270.2, 270.3, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Thallium	EPA 6010, 7840, 239.2, or equivalent	0.2
Vanadium	EPA 6010, 7910, 239.2, or equivalent	0.5
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste ID, Regulatory compliance - H&S monit.	Both
Precious metal	Monetary evaluation	Off-site
Cyanide (T)	Regulatory compliance - H&S monit.	Off-site
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Barium	Regulatory compliance - H&S monit.	Off-site
Beryllium	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Cobalt	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Mercury	Regulatory compliance - H&S monit.	Off-site
Molybdenum	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Selenium	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Vanadium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Strip tank

Sample Type	9. Sampling Frequency
Waste identification samples	Check each tank generated for pH
Monetary evaluation samples	Per contract
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.
B. Each load of this waste type being generated at the facility is sampled immediately and subjected to a visual examination, and in-house pH testing to ensure health and safety.
C. Manually agitate the solution using a clean stirring rod, sampling tube, or the parts tumbler.
D. Immediately collect a grab sample from near the middle of the tank using a sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!
F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each load of this waste type generated at the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation.
Also, each load waste of this type generated at the facility must be sampled and analyzed to determine the precious metal content and thereby net worth, for accounting purposes. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual agitation, followed by grab sampling directly from the tank using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least one sample per year of each waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-9
9	**Precious metal precipitate (mud)**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (mg/kg)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Antimony	EPA 6010, 7040, 200.7, or equivalent	2.5
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	2.5
Barium	EPA 6010, 7080, 200.7, or equivalent	1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.5
Cadmium	EPA 6010, 7130, 200.7, or equivalent	1
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.5
Cobalt	EPA 6010, 7200, 200.7, or equivalent	2
Copper	EPA 6010, 7210, 200.7, or equivalent	2
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	3
Mercury	EPA 7470, 7471, 245.1, 245.2, or equiv.	0.06
Molybdenum	EPA 6010, 7480, 239.2, or equivalent	2
Nickel	EPA 6010, 7520, 239.2, or equivalent	2
Selenium	EPA 6010, 7740, 270.2, 270.3, or equiv.	2.5
Silver	EPA 6010, 7760, 239.2, or equivalent	1
Thallium	EPA 6010, 7840, 239.2, or equivalent	2.5
Vanadium	EPA 6010, 7910, 239.2, or equivalent	2
Zinc	EPA 6010, 7950, 239.2, or equivalent	2

	6. Purpose of Analysis	7. Analysis Location
pH	Waste identification/Regulatory compliance	Both
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Barium	Regulatory compliance - H&S monit.	Off-site
Beryllium	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Cobalt	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Mercury	Regulatory compliance - H&S monit.	Off-site
Molybdenum	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Selenium	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Vanadium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Precipitation tank

Sample Type	9. Sampling Frequency
Waste identification	Only as needed
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.
B. Manually collect a sample of the precipitate "mud" directly from the treatment container; either by hand or using a clean scoop.
C. Complete the visual examination of the waste, and, if necessary, transfer the sample to a clean plastic bag for off-site analysis.

12. Rationale for Questions 8 to 11

All waste materials that are influent to this item are subjected to routine analyusis, and therefore a simple visual examination of this material is sufficeint to confirm the identity of each batch. If a question exists as to waste identity, an in-house pH test may be performed. Due to the limited variation in waste content, annual samples are sufficeint for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual grab sampling will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validty/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additonal QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliablity. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-10
10	**Precious metal precipitate supernatant & water wash (referred to as "Lean Liquor")**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Precious metal	EPA 231.1, 231.2, or fire assay	10
Cyanide (T)	EPA 9010, 335.2, or equivalent	0.04
Antimony	EPA 6010, 7040, 200.7, or equivalent	2
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	0.1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.2
Cadmium	EPA 6010, 7130, 200.7, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Thallium	EPA 6010, 7840, 239.2, or equivalent	0.2
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste ID, Regulatory compliance - H&S monit.	Both
Precious metal	Monetary evaluation	Off-site
Cyanide (T)	Regulatory compliance - H&S monit.	Off-site
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Beryllium	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Precipitation tank

Sample Type	9. Sampling Frequency
Waste identification samples	Check each tank generated for pH
Monetary evaluation samples	Per contract
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. Each load of this waste type being generated at the facility is sampled immediately and subjected to a visual examination, and in-house pH testing to ensure health and safety.

C. Manually agitate the solution using a clean stirring rod, sampling tube, or pipette.

D. Immediately collect a grab sample from near the middle of the tank using a sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!

F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or

off-site analysis.

12. Rationale for Questions 8 to 11
Each load of this waste type generated at the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation.
Also, each waste of this type generated at the facility must be sampled and analyzed to determine the precious metal content and thereby net worth, for accounting purposes. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual agitation, followed by grab sampling directly from the tank using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data
All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least one sample per year of each waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-11
11	**Acid purification solution**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Antimony	EPA 6010, 7040, 200.7, or equivalent	2
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	0.1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.2
Cadmium	EPA 6010, 7130, 200.7, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Thallium	EPA 6010, 7840, 239.2, or equivalent	0.2
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste ID, Regulatory compliance - H&S monit.	Both
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Beryllium	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Treatment container

Sample Type	9. Sampling Frequency
Waste identification samples	Check each tank generated for pH
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. Each load of this waste type being generated at the facility is sampled immediately and subjected to a visual examination, and in-house pH testing to ensure health and safety.

C. Manually agitate the solution using a clean stirring rod, sampling tube, or pipette.

D. Immediately collect a grab sample from near the middle of the treatment container using a sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!

F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each load of this waste type generated at the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation.
Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual agitation, followed by grab sampling directly from the tank using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least one sample per year of each waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-12
12	**Neutralized acid solution**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Antimony	EPA 6010, 7040, 200.7, or equivalent	2
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	0.1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.2
Cadmium	EPA 6010, 7130, 200.7, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Thallium	EPA 6010, 7840, 239.2, or equivalent	0.2
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste ID, Regulatory compliance - H&S monit.	Both
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Beryllium	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE		
8. Grab or Composite Sample		10. Sample Location
Grab		Treatment container

Sample Type	9. Sampling Frequency
Waste identification samples	Check each tank generated for pH
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. Each load of this waste type being generated at the facility is sampled immediately and subjected to a visual examination, and in-house pH testing to ensure health and safety.

C. Manually agitate the solution using a clean stirring rod, sampling tube, or pipette.

D. Immediately collect a grab sample from near the middle of the treatment container using a sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!

F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each load of this waste type generated at the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation; as well as complete treatment. Due to the limited variation in waste content, annual samples are sufficeint for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual agitiation, followed by grab sampling directly from the tank using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validty/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additonal QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least one sample per year of each waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliablity. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-13
13	**Wastewater-sludge without cyanide**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; pH meter or paper	0.05
ORP		
Free chlorine	portable pool-type test kit	0.5
Cyanide (T)	EPA 9010, 335.2, or equivalent	0.04
Antimony	EPA 6010, 7040, 200.7, or equivalent	2
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	0.1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.2
Cadmium	EPA 6010, 7130, 200.7, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Thallium	EPA 6010, 7840, 239.2, or equivalent	0.2
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste ID/Regulatory compliance	Both
ORP	Waste ID/Treatment monitoring	On-site
Free chlorine	Waste ID/Treatment monitoring	On-site
Cyanide (T)	Regulatory compliance - H&S monit.	Off-site
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Beryllium	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Wastewater treatment tank

Sample Type	9. Sampling Frequency
Waste identification samples	Check each tank treated for ORP and/or free chlorine
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.
B. Each load of this waste type being treated at the facility is subjected to a visual examination, as well as in-house pH and ORP testing, using probes, to ensure health and safety.
C. To collect regulatory compliance samples, manually agitate the solution using a clean stirring rod, sampling tube, or pipette.
D. Immediately collect a grab sample from near the middle of the tank using a sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!

F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11
Each load of this waste type treated at the facility must be analyzed to determine ORP and pH, in order to ensure proper identification as well as complete waste treatment.
Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically not homogenous solutions, they must be manually agitated, prior to grab sampling directly from the tank using pipette or sampling tube, in order to produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data
All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least one sample per year of each waste type to an independent testing lab, and then comparing the respective data. The accuracy of the ORP meter is determined by running an on-site free chlorine test or off-site cyanide analysis.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-14
14	**Filter cake**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/KG)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Cyanide (T)	EPA 9010, 335.2, or equivalent	0.04
Antimony	EPA 6010, 7040, 200.7, or equivalent	2.5
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	2.5
Barium	EPA 6010, 7080, 200.7, or equivalent	1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.5
Cadmium	EPA 6010, 7130, 200.7, or equivalent	1
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.5
Cobalt	EPA 6010, 7200, 200.7, or equivalent	2
Copper	EPA 6010, 7210, 200.7, or equivalent	2
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	3
Molybdenum	EPA 6010, 7480, 239.2, or equivalent	2
Nickel	EPA 6010, 7520, 239.2, or equivalent	2
Selenium	EPA 6010, 7740, 270.2, 270.3, or equiv.	2.5
Silver	EPA 6010, 7760, 239.2, or equivalent	1
Thallium	EPA 6010, 7840, 239.2, or equivalent	2.5
Vanadium	EPA 6010, 7910, 239.2, or equivalent	2
Zinc	EPA 6010, 7950, 239.2, or equivalent	2

	6. Purpose of Analysis	7. Analysis Location
pH	Regulatory compliance - H&S monit.	Both
Cyanide (T)	Regulatory compliance - H&S monit.	Off-site
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Barium	Regulatory compliance - H&S monit.	Off-site
Beryllium	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Cobalt	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Molybdenum	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Selenium	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Vanadium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Composite		Filter press

Sample Type	9. Sampling Frequency
Waste identification samples	Visually examine each load generated
Reg. compliance samples- Health & safety monitoring	Annually; or in event of processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.
B. Each load of this waste type generated at the facility is subjected to a visual examination, to ensure health and safety.

C. To collect regulatory compliance samples, manually collect at least three distinctly different samples from various locations in the filter press receiving container.
D. Complete the visual examination of the waste, and, if necessary, transfer the samples to a clean plastic bag for off-site analysis.

12. Rationale for Questions 8 to 11
Each load of this waste type generated at the facility is subjected to a visual examination to ensure that the waste is as anticipated. Routine analysis of the filter cake waste is not necessary as the influent waste stream is continuously monitored throughout the treatment process for pH and ORP. If a question arises as to waste identity, an in-house pH or free chlorine test may be performed. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are not always homogenous, several distinct samples will be manually collected from various locations within the container. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data
All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-15
15	Nonhazardous wastewater effluent	*Rvsd. 5.11*

ANALYSES INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Cyanide (T)	EPA 9010, 335.2, or equivalent	0.04
Antimony	EPA 6010, 7040, 200.7, or equivalent	2
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	0.1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.2
Cadmium	EPA 6010, 7130, 200.7, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Thallium	EPA 6010, 7840, 239.2, or equivalent	0.2
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

Additional testing may be required to demonstrate compliance with the Clean Water Act federal pretreatment program.

	6. Purpose of Analysis	7. Analysis Location
pH	All	Both
Cyanide (T)	All	Off-site
Antimony	Reg. compliance - H&S monitoring	Off-site
Arsenic	Reg. compliance - H&S monitoring	Off-site
Beryllium	Reg. compliance - H&S monitoring	Off-site
Cadmium	Reg. compliance - WW and H&S monitoring	Off-site
Chromium (T)	Reg. compliance - WW and H&S monitoring	Off-site
Copper	All	Off-site
Lead	All	Off-site
Nickel	All	Off-site
Silver	Reg. compliance - WW and H&S monitoring	Off-site
Thallium	Reg. compliance - H&S monitoring	Off-site
Zinc	All	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample	10. Sample Location
Grab sample of a composited waste	Final discharge sample box, or Wastewater Treatment tank

SAMPLING PROCEDURE

Sample Type	9. Sampling Frequency
Batch monitoring	Each load discgharged
Reg. Compliance wastewater monitoring	Twice yearly, or additionally in the event of discharge quality problems
Reg. Compliance - H&S monitoring	Annually; or in event of discharge quality problems, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. Each load of this waste type being generated at the facility is sampled immediately and subjected to a visual examination, and in-house pH testing to ensure health and safety; prior to being transferred off-site for additional lab work.

C. To collect a sample from the wastewater treatment tank, agitate the solution using the tank mixer or a clean stirring rod and immediately submerge a clean sample container or sampling tube.

D. To collect a sample of the discharged wastewater, submerge a clean sample container into the final discharge sampling box for the wastewater treatment system, while discharge operations are in progress.

E. Transfer the sample to a clean labeled sample bottle for visual examination, in-house pH testing (and free chlorine/ORP if desired), and/or off-site analysis.

12. Rationale for Questions 8 to 11
Each load of this waste type generated at the facility must be sampled and analyzed to determine metals and pH, prior to sewering, in order to verify that the treated effluent meets all of the POTW discharge standards.

Since the wastes that comprise this type are typically homogenous solutions, the collection of one grab sample pe batch, should produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data
All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending a duplicate sample from each batch of waste so generated to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-16
16	**Resin regenerant solution, acidic**	*Rvsd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Antimony	EPA 6010, 7040, 200.7, or equivalent	2
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	0.1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.2
Cadmium	EPA 6010, 7130, 200.7, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Thallium	EPA 6010, 7840, 239.2, or equivalent	0.2
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste identification/Regulatory compliance	Both
Antimony	Regulatory compliance	Off-site
Arsenic	Regulatory compliance	Off-site
Beryllium	Regulatory compliance	Off-site
Cadmium	Regulatory compliance	Off-site
Chromium (T)	Regulatory compliance	Off-site
Copper	Regulatory compliance	Off-site
Lead	Regulatory compliance	Off-site
Nickel	Regulatory compliance	Off-site
Silver	Regulatory compliance	Off-site
Thallium	Regulatory compliance	Off-site
Zinc	Regulatory compliance	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Wastewater pH neutralization container

Sample Type	9. Sampling Frequency
Waste ID	Each load generated
Reg. compliance samples- Health & safety monitoring	Annually if generated in that year; or additionally in event of processing problems; or unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. Each load of this waste type being generated at the facility is sampled immediately and subjected to a visual examination, and in-house pH testing to ensure health and safety.

C. Agitate the solution using an impeller mixer or clean stirring rod or sampling tube.

D. Immediately collect a grab sample from near the middle of the pH neutralization container using a sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!

E. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each load of this waste type generated at the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple agitation, followed by grab sampling directly from the pH neutralization container using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least 1 sample per year of this waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-17
17	**Resin regenerate solution, caustic**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste identification/Regulatory compliance	Both
Copper	Regulatory compliance	Off-site
Lead	Regulatory compliance	Off-site
Nickel	Regulatory compliance	Off-site
Zinc	Regulatory compliance	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Ion exchange system discharge pump port

Sample Type	9. Sampling Frequency
Waste ID	Each load generated for pH
Reg. compliance samples- Health & safety monitoring	Annually if generated in that year; or additionally in event of processing problems; or unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. Each load of this waste type being generated at the facility is sampled immediately and subjected to a visual examination, and in-house pH testing to ensure health and safety.

C. Agitate the solution using an impeller mixer or clean stirring rod or sampling tube.

D. Collect a grab sample prior to discharge to the pH neutralization container by manually opening the sample port valve located on the discharge side of the pump from the ion exchange system, .

E. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each load of this waste type generated at the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple agitation, followed by grab sampling directly from the sampling port will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least 1 sample per year of this waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-18
18	**Spent ion exchange resin**	*Rsvd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Antimony	EPA 6010, 7040, 200.7, or equivalent	2.5
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	2.5
Barium	EPA 6010, 7080, 200.7, or equivalent	1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.5
Cadmium	EPA 6010, 7130, 200.7, or equivalent	1
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.5
Cobalt	EPA 6010, 7200, 200.7, or equivalent	2
Copper	EPA 6010, 7210, 200.7, or equivalent	2
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	3
Molybdenum	EPA 6010, 7480, 239.2, or equivalent	2
Nickel	EPA 6010, 7520, 239.2, or equivalent	2
Selenium	EPA 6010, 7740, 270.2, 270.3, or equiv.	2.5
Silver	EPA 6010, 7760, 239.2, or equivalent	1
Thallium	EPA 6010, 7840, 239.2, or equivalent	2.5
Vanadium	EPA 6010, 7910, 239.2, or equivalent	2
Zinc	EPA 6010, 7950, 239.2, or equivalent	2

	6. Purpose of Analysis	7. Analysis Location
pH	Waste identification/Regulatory compliance	Both
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Barium	Regulatory compliance - H&S monit.	Off-site
Beryllium	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Cobalt	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Molybdenum	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Selenium	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Vanadium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Composite		Waste container

Sample Type	9. Sampling Frequency
Waste ID	Each load generated for pH
Reg. compliance samples- Health & safety monitoring	Annually, but only in years in which generated; or in event of a processing problem, unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. Empty the contents of one of the ion exchange columns into an open-top DOT shipping container.

C. Immediately collect a sample from near the middle of the container using a beaker, and transfer the entire sample to a labeled container.
D. Repeat procedures B and C above for ion exchange columns 2 and 3, emptying the columns into the same shipping container, directly on the waste already in place.
E. Combine the three discreet samples into the same labeled sample container for visual examination, in-house pH testing, or off-site analysis.
F. In-house pH testing will be accomplished using the liquid effluent drained from the columns prior to transferring the resin to a waste container, or alternatively from a water rinse of the solid resin material.

12. Rationale for Questions 8 to 11
Each load of this waste type generated at the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation. Due to the limited variation in waste content, and the fact that this waste type will not be generated annually, collecting annual samples for off-site analysis, but only in those years in which this waste is generated, should be sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically not homogenous, it is necessary to collect samples from each of the three ion columns, and then composite them. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data
All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least 1 sample per year of this waste, in those years that the waste is generated, to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-19
19	**Resin regenerant solution, neutralized**	*RSVD. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/L)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Antimony	EPA 6010, 7040, 200.7, or equivalent	2
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	0.1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.2
Cadmium	EPA 6010, 7130, 200.7, or equivalent	0.02
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.03
Copper	EPA 6010, 7210, 200.7, or equivalent	0.03
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	0.05
Nickel	EPA 6010, 7520, 239.2, or equivalent	0.05
Silver	EPA 6010, 7760, 239.2, or equivalent	0.02
Thallium	EPA 6010, 7840, 239.2, or equivalent	0.2
Zinc	EPA 6010, 7950, 239.2, or equivalent	0.05

	6. Purpose of Analysis	7. Analysis Location
pH	Waste identification/Regulatory compliance	Both
Antimony	Regulatory compliance	Off-site
Arsenic	Regulatory compliance	Off-site
Beryllium	Regulatory compliance	Off-site
Cadmium	Regulatory compliance	Off-site
Chromium (T)	Regulatory compliance	Off-site
Copper	Regulatory compliance	Off-site
Lead	Regulatory compliance	Off-site
Nickel	Regulatory compliance	Off-site
Silver	Regulatory compliance	Off-site
Thallium	Regulatory compliance	Off-site
Zinc	Regulatory compliance	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Grab		Wastewater pH neutralization container

Sample Type	9. Sampling Frequency
Waste ID	Each load generated
Reg. compliance samples- Health & safety monitoring	Annually if generated in that year; or additionally in event of processing problems; or unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.

B. Each load of this waste type being generated at the facility is sampled immediately and subjected to a visual examination, and in-house pH testing to ensure health and safety.

C. Manually agitate the solution using a clean stirring rod or sampling tube.

D. Immediately collect a grab sample from near the middle of the treatment container using a sampling tube, or pipette with bulb. Do Not pipette hazardous waste samples by mouth!

F. Transfer the solution to a clean sample bottle for visual examination, in-house pH testing, and/or off-site analysis.

12. Rationale for Questions 8 to 11

Each load of this waste type generated at the facility must be sampled and analyzed to determine pH, in order to ensure proper waste identification and segregation. Due to the limited variation in waste content, annual samples are sufficeint for the purposes of regulatory compliance.

Since the wastes that comprise this type are typically homogenous solutions, simple manual agitiation, followed by grab sampling directly from the treatment container using pipette or drum sampling tube will produce representative samples. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validty/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additonal QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

The accuracy of the on-site pH testing is verified by sending at least 1 sample per year of this waste type to an independent testing lab, and then comparing the respective data.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliablity. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

J&B ENTERPRISES - TABLE 5 - SAMPLING AND ANALYSIS OF WASTE

WASTE STREAM INFORMATION

1. Waste Stream ID	2. Common Name of Hazardous Waste	WS-20
20	**Evaporator solids**	*Rvsd. 5.11*

ANALYSIS INFORMATION

3. Constituents Analyzed	4. Analytical Method Used	5. Detect. Limits (MG/KG)
pH	EPA 150.1, 9040, 9045; or pH meter or paper	0.05
Cyanide (T)	EPA 9010, 335.2, or equivalent	0.04
Antimony	EPA 6010, 7040, 200.7, or equivalent	2.5
Arsenic	EPA 6010, 7060, 206.2, 206.3, or equiv.	2.5
Barium	EPA 6010, 7080, 200.7, or equivalent	1
Beryllium	EPA 6010, 7090, 200.7, or equivalent	0.5
Cadmium	EPA 6010, 7130, 200.7, or equivalent	1
Chromium (T)	EPA 6010, 7190, 200.7, or equivalent	0.5
Cobalt	EPA 6010, 7200, 200.7, or equivalent	2
Copper	EPA 6010, 7210, 200.7, or equivalent	2
Lead	EPA 6010, 7420, 7421, 239.2, or equiv.	3
Mercury	EPA 6010, 7470, 7471, 245.1, 245.2, or equiv	0.1
Molybdenum	EPA 6010, 7480, 239.2, or equivalent	2
Nickel	EPA 6010, 7520, 239.2, or equivalent	2
Selenium	EPA 6010, 7740, 270.2, 270.3, or equiv.	2.5
Silver	EPA 6010, 7760, 239.2, or equivalent	1
Thallium	EPA 6010, 7840, 239.2, or equivalent	2.5
Vanadium	EPA 6010, 7910, 239.2, or equivalent	2
Zinc	EPA 6010, 7950, 239.2, or equivalent	2

	6. Purpose of Analysis	7. Analysis Location
pH	Regulatory compliance - H&S monit.	Both
Cyanide (T)	Regulatory compliance - H&S monit.	Off-site
Antimony	Regulatory compliance - H&S monit.	Off-site
Arsenic	Regulatory compliance - H&S monit.	Off-site
Barium	Regulatory compliance - H&S monit.	Off-site
Beryllium	Regulatory compliance - H&S monit.	Off-site
Cadmium	Regulatory compliance - H&S monit.	Off-site
Chromium (T)	Regulatory compliance - H&S monit.	Off-site
Cobalt	Regulatory compliance - H&S monit.	Off-site
Copper	Regulatory compliance - H&S monit.	Off-site
Lead	Regulatory compliance - H&S monit.	Off-site
Mercury	Regulatory compliance - H&S monit.	Off-site
Molybdenum	Regulatory compliance - H&S monit.	Off-site
Nickel	Regulatory compliance - H&S monit.	Off-site
Selenium	Regulatory compliance - H&S monit.	Off-site
Silver	Regulatory compliance - H&S monit.	Off-site
Thallium	Regulatory compliance - H&S monit.	Off-site
Vanadium	Regulatory compliance - H&S monit.	Off-site
Zinc	Regulatory compliance - H&S monit.	Off-site

SAMPLING PROCEDURE

8. Grab or Composite Sample		10. Sample Location
Composite		evaporator tank, or shipping container

Sample Type	9. Sampling Frequency
Waste identification samples	Visually examine each load generated
Reg. compliance samples- Health & safety monitoring	Annually if generated in that year; or additionally in event of processing problems; or unusual odor/appearance, pH, specific gravity, or other problem

11. Describe Sampling Procedure

A. Hazardous waste sampling may not be performed until the following Personal Protective Equipment is operational and worn; chemical protective gloves, goggles or face shield, authorized work clothes.
B. Each load of this waste type generated at the facility is subjected to a visual examination, to ensure health and safety.
C. To collect regulatory compliance samples, manually collect at least three distinctly different samples.
D. Complete the visual examination of the waste, and, if necessary, transfer the samples to a clean plastic bag for off-site analysis.

12. Rationale for Questions 8 to 11

Each load of this waste type generated at the facility is subjected to a visual examination to ensure that the waste is as anticipated. Routine analysis of the evaporator solids is not necessary to ensure complete treatment.
If a question arises as to waste identity, an in-house pH or free chlorine test may be performed. Due to the limited variation in waste content, annual samples are sufficient for the purposes of regulatory compliance.

Since the wastes that comprise this type are not always homogenous, several distinct samples will be manually collected. Sample container types, volumes, and preservatives are determined by the analytical procedure used, in consultation with the testing lab.

13. Procedure for Verifying Validity/Accuracy of Sampling Data

All off-site lab work is performed by independent testing labs, that are required to calibrate all testing equipment prior to use, and to analyze additional QA/QC samples per EPA standard method requirements, in order to help ensure complete recovery, data reproducibility, and an absence of false positives.

A duplicate sample will also be collected for every 20 Regulatory Compliance samples sent off-site These duplicate samples will be analyzed at an independent testing lab in order to help ensure data reliability. Additional samples will be sent off-site for verification in the event of a processing problem; as well as unusual odor, appearance, pH, or specific gravity.

SECTION III – TABLE 6 – TREATMENT STANDARDS
(OFF-SITE GENERATED)

Table 6, 5 pages total, May 2011

Note: In order to have a more complete table, some minor changes have been made to reflect some secondary waste codes. These new codes, both Federal and California, are in italics and represent rare or occasional wastes that the facility may handle.

J&B ENTERPRISES - TABLE 6 **TREATMENT STANDARDS**

Rvsd. 5.11 - Changes italized = secondary waste codes

WASTE STREAM #	WASTE STREAM NAME	EPA WASTE CODES	LDR WASTE CODES	PHYSICAL STATE	TREATMENT STANDARDS				
					CONSTITUENT	CONC. (MG/L)	ANALYTICAL METHOD	SAMPLE TYPE	TECHNOLOGY
OFF-SITE GENERATED WASTES									
1	Aqueous Solution with cyanide and Precious Metals	FOO7, FOO9, D002, D003, D004, D006, D007, D008, and/or D011 *F006, F008*	FOO7, FOO9, D002, D003, D004, D006, D007, D008, and/or D011	Liquid	Chromium (T) Cyanide (T) Cyanide (A) Lead Nickel Arsenic Cadmium Silver UTS	2.77 1.2 0.86 0.69 3.98 5.0 1.0 5.0 22 CCR 66268.48	TCLP	Grab	Caustic Deactivation
2	Non-reactive Dragout Solutions w/Precious Metals	FOO7, FOO9, D004, D006, D007, D008, and/or D011 *F008, F009*	FOO7, FOO9, D004, D006, D007, D008, and/or D011	Liquid	Chromium (T) Cyanide (T) Cyanide (A) Lead Nickel Arsenic Cadmium Silver	2.77 1.2 0.86 0.69 3.98 5.0 1.0 5.0	TCLP	Grab	None
3	Non-Cyanide Precious Metal Solutions (non-acidic)	NonRCRA or D002, D004, D006, D007, D008, D010, and/or, D011 *D009, D010*	Liq. NonRCRA, D002, D004, D006, D007, D008, D010, and/or, D011	Liquid	UTS Arsenic Cadmium Chromium (T) Lead Selenium Silver	22 CCR 66268.48 5.0 1.0 5.0 5.0 1.0 5.0	TCLP	Grab	Caustic Deactivation
4	Iodine etch solutions	NonRCRA	Liq. NonRCRA	Liquid	UTS	22 CCR 66268.48	TCLP	Grab	None

J&B ENTERPRISES - TABLE 6 (Continued) TREATMENT STANDARDS

WASTE STREAM #	WASTE STREAM NAME	EPA WASTE CODES	LDR WASTE CODES	PHYSICAL STATE	TREATMENT STANDARDS				
					CONSTITUENT	CONC. (MG/L)	ANALYTICAL METHOD	SAMPLE TYPE	TECHNOLOGY
5	Residues Containing Precious Metals	F006, F007, F008, F009, D002, D003, D004, D006, D007, D008, and/or D011 *D008, D010*	F006, F007, F008, F009, D002, D003, D004, D006, D007, D008, and/or D011	Solid	Chromium (T) Cyanide (T) Cyanide (A) Lead Nickel Arsenic Cadmium Silver UTS	0.86 TCLP 590 30 0.37 TCLP 5.0 TCLP 5.0 EP 0.19 TCLP 0.30 TCLP 22 CCR 66268.48	TCLP	Grab	Caustic Deactivation
6	Solder dross	D008 D004, D006 and/or D011	D008 D004, D006 and/or D011	Solid	Arsenic Cadmium Lead Silver	5.0 EP 1.0 TCLP 5.0 TCLP or EP 5.0 TCLP	TCLP	Grab	
7	Photographic Sol'ns. with silver	D011 DOO7	D011 DOO7	Liquid	Chromium (T) Silver	5.0 5.0	TCLP	Grab	
				ON-SITE GENERATED WASTES					
8	Cyanide strip solution (on-site)	D002, D003, D004, D006, D007, D008, and/or D011 *D009, D010* *F009*	D002, D003, D004, D006, D007, D008, and/or D011	Liquid	Cyanide (A) Arsenic Cadmium Chromium (T) Lead Silver UTS	0.86 5.0 1.0 5.0 5.0 5.0 22 CCR 66268.48	TCLP	Grab	Caustic Deactivation
9	Precious metal precipitate	FOO7, FOO9, D004, D006, D007, D008, and/or D011	FOO7, FOO9, D004, D006, D007, D008, and/or D011	Solid	Chromium (T) Cyanide (T) Cyanide (A) Lead Nickel Arsenic Cadmium Silver	0.86 TCLP 590 30 0.37 TCLP 5.0 TCLP 5.0 EP 0.19 TCLP 0.30 TCLP	TCLP	Grab	

J&B ENTERPRISES - TABLE 6 (Continued) TREATMENT STANDARDS

WASTE STREAM #	WASTE STREAM NAME	EPA WASTE CODES	LDR WASTE CODES	PHYSICAL STATE	TREATMENT STANDARDS				
					CONSTITUENT	CONC. (MG/L)	ANALYTICAL METHOD	SAMPLE TYPE	TECHNOLOGY
10	Precious metal precipitate supernatant & water wash (Lean liquor)	FOO7, FOO9, D002, D003, D004, D006, D007, D008, and/or D011	FOO7, FOO9, D002, D003, D004, D006, D007, D008, and/or D011	Liquid	Chromium (T)	2.77	TCLP	Grab	Caustic Deactivation
					Cyanide (T)	1.2			
					Cyanide (A)	0.86			
					Lead	0.69			
					Nickel	3.98			
					Arsenic	5.0			
					Cadmium	1.0			
					Silver	5.0			
					UTS	22 CCR 66268.48			
11	Acid purification solution	FOO7, FOO9, D002, D004, D006, D007, D008, and/or D011 *D009, F008*	FOO7, FOO9, D002, D004, D006, D007, D008, and/or D011	Liquid	Chromium (T)	2.77	TCLP	Grab	Acid Deactivation
					Cyanide (T)	1.2			
					Cyanide (A)	0.86			
					Lead	0.69			
					Nickel	3.98			
					Arsenic	5.0			
					Cadmium	1.0			
					Silver	5.0			
					UTS	22 CCR 66268.48			
12	Neutralized acid solution	FOO7, FOO9, D004, D006, D007, D008, and/or D011	FOO7, FOO9, D004, D006, D007, D008, and/or D011	Liquid	Chromium (T)	2.77	TCLP	Grab	
					Cyanide (T)	1.2			
					Cyanide (A)	0.86			
					Lead	0.69			
					Nickel	3.98			
					Arsenic	5.0			
					Cadmium	1.0			
					Silver	5.0			
13	Wastewater-sludge solution without cyanide	FOO7, FOO9, D004, D006, D007, D008, D011, and/or F006	FOO7, FOO9, D004, D006, D007, D008, and/or D011 F006	Liquid with solids	Chromium (T)	0.86 TCLP	TCLP	Grab	
					Cyanide (T)	590			
					Cyanide (A)	30			
					Lead	0.37 TCLP			
					Nickel	5.0 TCLP			
					Arsenic	5.0 TCLP			
					Cadmium	0.19 TCLP			
					Silver	0.3 TCLP			

J&B ENTERPRISES - TABLE 6 (Continued) TREATMENT STANDARDS

WASTE STREAM #	WASTE STREAM NAME	EPA WASTE CODES	LDR WASTE CODES	PHYSICAL STATE	TREATMENT STANDARDS				
					CONSTITUENT	CONC. (MG/L)	ANALYTICAL METHOD	SAMPLE TYPE	TECHNOLOGY
14	Filter cake	F006, F007, F009, D002, D003, D004, D006, D007, D008, D010, and/or D011	F006, F007, F009, D002, D003, D004, D006, D007, D008, D010, and/or D011	Solid	Chromium (T)	0.86 TCLP	TCLP	Grab	
					Cyanide (T)	590			
					Cyanide (A)	30			
					Lead	0.37 TCLP			
					Nickel	5.0 TCLP			
					Arsenic	5.0 EP			
					Cadmium	0.19 TCLP			
					Silver	0.30 TCLP			
					UTS	22 CCR 66268.48			
15	Nonhazardous wastewater effluent	NonRCRA NonHaz	Aqueous sol'n with metals	Liquid	**See waste # 13 above for effluent standards**				
16	Resin regenerate solution, acidic	FOO7, FOO9, D002, D004, D006, D007, D008, and/or D011	FOO7, FOO9, D002, D004, D006, D007, D008, and/or D011	Liquid	Chromium (T)	2.77	TCLP	Grab	Acid Deactivation
					Cyanide (T)	1.2			
					Cyanide (A)	0.86			
					Lead	0.69			
					Nickel	3.98			
					Arsenic	5.0			
					Cadmium	1.0			
					Silver	5.0			
17	Resin regenerate solution, caustic	FOO7, FOO9, D002, D004, D006, D007, D008, and/or D011	FOO7, FOO9, D002, D004, D006, D007, D008, and/or D011	Liquid	Chromium (T)	2.77	TCLP	Grab	Caustic Deactivation
					Cyanide (T)	1.2			
					Cyanide (A)	0.86			
					Lead	0.69			
					Nickel	3.98			
					Arsenic	5.0			
					Cadmium	1.0			
					Silver	5.0			

J&B ENTERPRISES - TABLE 6 (Continued) TREATMENT STANDARDS

WASTE STREAM #	WASTE STREAM NAME	EPA WASTE CODES	LDR WASTE CODES	PHYSICAL STATE	TREATMENT STANDARDS				
					CONSTITUENT	CONC. (MG/L)	ANALYTICAL METHOD	SAMPLE TYPE	TECHNOLOGY
18	Spent ion exchange resin	FOO7, FOO9, D004, D006, D007, D008, and/or D011	FOO7, FOO9, D004, D006, D007, D008, and/or D011	Solid	Chromium (T)	0.86 - TCLP	TCLP	Grab	
					Cyanide (T)	590			
					Cyanide (A)	30			
					Lead	0.37 - TCLP			
					Nickel	5.0 - TCLP			
					Arsenic	5.0 - TCLP			
					Cadmium	0.19 - TCLP			
					Silver	0.30 - TCLP			
19	Resin regenerate solution, neutralized	FOO7, FOO9, D004, D006, D007, D008, and/or D011	FOO7, FOO9, D004, D006, D007, D008, and/or D011	Liquid	Chromium (T)	2.77	TCLP	Grab	
					Cyanide (T)	1.2			
					Cyanide (A)	0.86			
					Lead	0.69			
					Nickel	3.98			
					Arsenic	5.0			
					Cadmium	1.0			
					Silver	5.0			
20	Evaporator solids	FOO7, FOO9, D002, D003, D004, D006, D007, D008, D010, and/or D011	FOO7, FOO9, D002, D003, D004, D006, D007, D008, D010, and/or D011	Solid	Chromium (T)	0.86 - TCLP	TCLP	Grab	Caustic Deactivation
					Cyanide (T)	590			
					Cyanide (A)	30			
					Lead	0.37 - TCLP or EP			
					Nickel	5.0 - TCLP			
					Arsenic	5.0 - TCLP or EP			
					Cadmium	0.19 - TCLP			
		F006, F008			Selenium	5.7 - TCLP			
					Silver	0.3 - TCLP			
					UTS	22 CCR 66268.48			

SECTION III – TABLE 7 – SAMPLE HAZARDOUS WASTE PROFILE AND LDR LAND BAN NOTICES (OFF-SITE GENERATED)

Table 7, 14 pages total, May 2011

Hazardous Waste Profile Sheet

J and B Enterprises

1650 Russell Ave Santa Clara, CA 95054 Phone (408) 988-7900 Fax (408) 988-4520

Generator Name	J&B Enterprises	EPA-ID-Number	CAD982052797
Contact		StateGeneratorID	HAES36-058284
Address	1650 Russell Ave.	GeneratorPhone	4089887900
	Santa Clara CA 95054-		

EPA Waste Number: D006//D008/D010/F007/F009 ID# UN1588 State Waste # 171

Proper DOT Shipiing Name: Waste Cyanides, Inorganic, solid, n.o.s. (cyanide solid with F007 & F009) Class 6.1, UN1588, PG II RQ: 1 Lbs DOT Class 6.1

Process Generating Waste: Evaporation

Physical Characteristics of: Evaporator Solids

Color Orange/Brow Odor Mild Appearance Other/Describe

Physical State at 70F Dry Solid Layers Single-Layered FreeLiquid No Weight/Volume

Ph 9 - 12 SpGravity FlashPoint No Flash

Chemical Composition (Total must add up to 100 Percent)

Zinc	5 - 15	Cyanide	2 - 10
Copper	1 - 5	Sulfur	1 - 10
Other Metals (al,Fe,Ni	1 - 5	Lead	0.01 - 0.1
Halogens	1 - 10	Other Inorganics (Na	25 - 60
Water	10 - 30		

Metals (Totals in ppm)

Antimony	16.8	Chromium-Hex	ND	Selenium	2.9
Arsenic	94.9	Copper	13,400	Silver	563
Barium	93.2	Lead	170	Thallium	52
Beryllium	3.99	Mercury	ND	Vanadium	0.33
Cadmium	0.43	Molybedenum	23.4	Zinc	1.99
Chromium	22.5	Nickel	5420		

Other Compounds (totals in ppm)

Cyanides	Sulfur	PCBs	TotalHalogens

CERTIFICATION

This is to certify that the information submitted is complete and accurate, and that all known or suspected hazards have been disclosed.

Signiture _____ **Title** _____

Print Name _____ **Date** _____

Filters

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under **40 CFR 268 and 22 CCR 66268**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **181**
2. EPA Hazardous Waste Number **D003/F007**
3. Corresponding Treatment Standard or Applicable Prohibition Level:

   Cadmium 0.19 mg/l TCLP, Chromium (Total) 0.86 mg/l TCLP, Lead 0.37 mg/l TCLP, Nickel 5.0 mg/l TCLP, Silver 0.30 mg/l TCLP, Cyanide (Total) 590 mg/kg, Cyanide (Amenable) 30.0 mg/kg

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Solder Dross

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under **40 CFR 268 and 22 CCR 66268**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **181**
2. EPA Hazardous Waste Number **D008**
3. Corresponding Treatment Standard or Applicable Prohibition Level:

   Lead=5.0 mg/l TCLP or 5.0 mg/l EP

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

S.LAW 1-5-12

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under **40 CFR 268.7(a) and 22 CCR 66268.7(a)**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 268 or 22 CCR 66268** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **181**
2. EPA Hazardous Waste Number D011
3. Corresponding Treatment Standard or Applicable Prohibition Level:

   5.0 mg/l Silver

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Silver Fixer

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under**40 CFR 268 and 22 CCR 66268,** which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **541**
2. EPA Hazardous Waste Number **D011**
3. Corresponding Treatment Standard or Applicable Prohibition Level:

   5.0 mg/l Silver

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Silver Plating

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under **40 CFR 268 and 22 CCR 66268**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **711**
2. EPA Hazardous Waste Number **F007/D003/D011**
3. Corresponding Treatment Standard or Applicable Prohibition Level:

   Lead 0.69 mg/l, Nickel 3.98 mg/l, Chrome (Total) 2.77 mg/l, Cyanide (Amenable) 0.86 mg/l, Cyanide (Total) 1.2 mg/l and Silver 5.0 mg/l

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Plating

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under **40 CFR 268 and 22 CCR 66268**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **711**
2. EPA Hazardous Waste Number **F007/D003**
3. Corresponding Treatment Standard or Applicable Prohibition Level:

   Lead 0.69 mg/l, Nickel 3.98 mg/l, Chrome (Total) 2.77 mg/l, Cyanide (Amenable) 0.86 mg/l, Cyanide (Total) 1.2 mg/l

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Dragoot Sol

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under**40 CFR 268 and 22 CCR 66268**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **131**
2. EPA Hazardous Waste Number **F007**
3. Corresponding Treatment Standard or Applicable Prohibition Level:

   Lead 0.69 mg/l, Nickel 3.98 mg/l, Chrome (Total) 2.77 mg/l, Cyanide (Amenable) 0.86 mg/l, Cyanide (Total) 1.2 mg/l

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Gold Stripping Solution

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under **40 CFR 268 and 22 CCR 66268,** which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **711**
2. EPA Hazardous Waste Number F009/D003
3. Corresponding Treatment Standard or Applicable Prohibition Level:

   Lead 0.69 mg/l, Nickel 3.98 mg/l, Chrome (Total) 2.77 mg/l, Cyanide (Amenable) 0.86 mg/l, Cyanide (Total) 1.2 mg/l

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Wipes Lead Liner

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under **40 CFR 268 and 22 CCR 66268**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **181**
2. EPA Hazardous Waste Number **D008/D011**
3. Corresponding Treatment Standard or Applicable Prohibition Level:

   Lead = 5.0 mg/l TCLP or 5.0 mg/l EP

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Evaporator Solids

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under **40 CFR 268 and 22 CCR 66268**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **171**
2. EPA Hazardous Waste Number **D006//D008/D010/F007/F009**
3. Corresponding Treatment Standard or Applicable Prohibition Level:

Lead 0.37 mg/l TCLP,Silver 0.30 mg/l TCLP, Cyanide (Amenable) 30.0 mg/l, Cyanide (Total) 590 mg/l, Cadium 0.19 mg/l TCLP, Arsenic 5.0 mg/l EP or TCLP, Chromium 0.86 mg/l TCLP, Nickel 5.0 mg/l TCLP,Selenium 5.7 mg/l TCLP& Universal Treatment Standards

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Palladium Solution
with Lead

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under**40CFR 268 and 22 CCR 66268,**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **132**
2. EPA Hazardous Waste Number **D008**
3. Corresponding Treatment Standard or Applicable Prohibition Level:

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Silver Stripping Sol

LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under **40 CFR 268 and 22 CCR 66268**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **40 CFR 267.7(a)(5) and 22 CCR 66268.7(a)(5)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **132**
2. EPA Hazardous Waste Number **D011**
3. Corresponding Treatment Standard or Applicable Prohibition Level:

   5.0 mg/l Silver

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

Jodme Eton

NON-RCRA HAZARDOUS WASTE
LAND BAN NOTIFICATION

Generator: **J&B Enterprises**
EPA-ID#: **CAD982052797**

Generator Notification to Treatment Facility Where Restricted Waste Requires Treatment Prior To Land Disposal

This notification is submitted to J&B Enterprises in accordance with the land disposal restrictions promulgated under **22 CCR 66268**, which requires the generator to test his waste or an extract thereof using the test method described, or to use knowledge of the waste to determine if the waste is restricted from land disposal. **66268.7(a)(5) and (a)(6)** also requires that information used to make this restricted waste determination be retained on-site by the generator.

The waste listed below is restricted from land disposal unless it is treated to the applicable treatment standard or is treated to meet the applicable prohibition level. If a generator determines he is managing a restricted waste and the waste requires treatment prior to land disposal, for each shipment of such waste, the generator must notify the treatment facility in writing of the appropriate treatment standard. This notification must include the information provided below.

1. CAL Hazardous Waste Number **135**
2. EPA Hazardous Waste Number NON/RCRA
3. Corresponding Treatment Standard or Applicable Prohibition Level:

Antimony 15.0 mg/l, Arsenic 5.0 mg/l, Barium 100.0 mg/l, Beryllium 0.75 mg/l, Cadmium 1.0 mg/l, Chromium (VI) 5.0 mg/l, Chromium (III) 560.0 mg/l, Cobalt 80.0 mg/l,Copper 25.0 mg/l, Lead 5.0 mg/l, Mercury 0.2 mg/l, Molybdenum 350.0 mg/l, Nickel 20.0 mg/l, Selenium 1.0 mg/l, Silver 5.0 mg/l, Thallium 7.0 mg/l, Vanadium 24.0 mg/l, Zink 250.0 mg/l

4. Manifest Number Associated with Shipment **2163507**
5. Waste Analysis Data, Where Available (Attached)

Authorized Signature _____ Date_____

APPENDIX B

LAND DISPOSAL RESTRICTIONS NOTIFICATION REQUIREMENTS

Generators: Generators must send a notification with the initial shipment of every waste to a TSDF. If the waste, process, or receiving facility changes, another notification is required. The information that the notification must include varies according to the status of the waste. Waste that needs treatment before it can be disposed of will have different information than waste that can be disposed of without treatment. Below is a table that details the required elements for LDR notifications.

Required Notification Information	Waste Needs to Meet Treatment Standard	Waste Meets Treatment Standard	Waste Is Not Subject to Treatment Standard	Waste Is In Lab Packs
1. EPA hazardous waste and manifest numbers of first shipment	X	X	X	X
2. Statement: This waste is subject to LDR	X	X		
3. Statement: This waste is not prohibited from land disposal			X	
4. The constituents of concern and any underlying hazardous constituents (if applicable)	X	X		
5. Indication whether it is wastewater or nonwastewater	X	X		
6. Waste analysis data (when available)	X	X	X	
7. Date the waste will be prohibited from land disposal			X	
8. For hazardous debris, when treating with the alternative treatment technologies, list the contaminants subject to treatment	X		X	
9. For contaminated soil, list the constituents subject to treatment and state whether the soil contains hazardous waste and meets the treatment standard	X	X		
10. A certification is needed (see applicable section for exact wording)		X		X

Treatment Facilities: Treatment facilities have to send similar notifications along with the shipment of treated wastes to disposal facilities. A certification must be included stating that the waste meets the treatment standards and may be land disposed. Below is a table detailing the information required for treatment facility notifications.

Required Notification Information	Waste Is Treated and Sent for Disposal
1. EPA hazardous waste and manifest number of first shipment	X
2. Statement that the waste is subject to LDR	X
3. The constituents of concern and any underlying hazardous constituents (if applicable)	X
4. Indication whether it is wastewater or nonwastewater	X
5. Waste analysis data (when available)	X
6. For contaminated soil, list the constituents subject to treatment and state whether the soil contains hazardous waste and meets the treatment standard	X
10. A certification statement is needed (see applicable section for exact wording)	X

STANDARDIZED PERMIT APPLICATION

SECTION IV - FACILITY DESIGN (STORAGE)

For

J&B ENTERPRISES
CAD982052797

July 2011

SECTION IV

FACILIYT DESIGN (STORAGE)

SECTION IV – FACILITY DESIGN (STORAGE)

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FACILITY DESIGN (STORAGE)

A STORAGE AREAS FOR DRUMS/CONTAINERS/TANKS/OTHER DEVICES

1. There are five storage areas at the facility, as designated below:

   S001 Solder Dross Storage (Solder Storage)
   S002 Gold Recovery System (GRS)
   S003 Ion Exchange/Corrosive Storage Area (Ion Exchange)
   S004 Cyanide Storage Shed (Shed)
   S005 Waste Water Treatment System (WTS)

2. Dimensions of storage areas, including berm height:

S001	Solder	20' by 20'	no berm (no liquid wastes)
S002	GRS	40' by 50'	8" high berm
S003	Ion Exchange	13' by 3 ¼'	1 ¼' high berm
S004	Shed	9 ¾' by 5 ½'	7 ½" high berm
S005	WTS	20' by 19'	1 ¼' high berm

3. Number of devices stored in each area:

S001	Solder	24 (Drums)
S002	GRS	100 (Drums) 10-15 (5-gal. pails, 15- or 30- gal. containers) 7 (IBC containers) 3 (Electrowinning tanks) 3 (Concentrator tanks) 7 (Precipitation tanks) 1 (Evaporator)
S003	Ion Exchange	4 (Ion exchange columns) 1 (Neutralization tank) 2 (Drums)
S004	Shed	9 (Drums)
S005	WTS	2 (Cone tanks) 1 (Filter press)

4. Size of storage devices in each area:

S001	Solder	30- or 55-gallon drums
S002	GRS	15-, 30- or 55-gallon Drums (100) 350 gallons each, IBC containers (7) 530 gallons each, Electorwinning tanks (3) 190 gallons each, Concentrator tanks (2) 320 gallons each, Concentrator tank (1) 200 gallons each, Precipitation tank (1) 150 gallons each, Precipitation tank (1) 150 gallons each, Precipitation tank (1) 100 gallons each, Precipitation tank (1) 100 gallons each, Precipitation tank (1) 50 gallons each, Precipitation tank (1) 50 gallons each, Precipitation tank (1) 190 gallons each, Evaporator tank (1)
S003	Ion Exchange	32 gallons each (4 columns)
S004	Shed	5, 15, 30, or 55 gallons each (9)
S005	WTS	1250 gallons each, Cone tanks (2) Filter press – Not applicable (1)

5. Storage devices are stacked as indicated below:

S001	Solder	2 rows of 12, double stacked (generally 55-gallon drums)
S002	GRS	Drums – 4 rows of 20, double stacked IBC containers – not stacked Electrowinning tanks– not stacked Concentrator tanks– not stacked Precipitation tanks– not stacked Evaporator tank – not stacked
S003	Ion Exchange	Columns – not stacked
S004	Shed	Drums – not stacked
S005	WTS	Cone tank– not stacked Filter press – not applicable

6. Hazardous waste storage:

Hazardous wastes received at the facility are stored and used in the following types of containers:

1. DOT approved container, Polyethylene drums, 55-gallon
2. DOT approved container, Polyethylene drums, 30-gallon
3. DOT approved container, Polyethylene drums, 15-gallon
4. DOT approved container, Plastic jerry cans, 5-gallon
5. DOT approved container, Metal drums, 55-gallon, w/removable heads and liner
6. DOT approved container, Polyethylene drums, 55-gallon, with removable heads
7. DOT approved container, Polyethylene drums, 30-gallon, with removable heads
8. DOT approved container, Metal drums, 55-gallon with removable heads
9. DOT approved container, Metal drums, 30-gallon with removable heads
10. DOT approved container, Metal drums, 15-gallon with removable heads
11. Pyrex jugs, 5-gallon
12. Plastic buckets, 5-gallon
13. Polyethylene containers, 100-gallon, open-top
14. Polyethylene containers, 50-gallon open-top
15. Polyethylene containers, 30-gallon open-top
16. Polyethylene containers, 15-gallon open-top
17. IBC (Intermediate Bulk Container) (Fiberboard box with liner), 1 cubic yard
18. Filter press
19. Ion exchange columns, 30-gallon
20. IBC (Intermediate Bulk Container) (Polyethylene) 330-gallon

For information on the waste treatment tanks and equipment, see Section V. For additional specification information for the above containers, see Section IV, Attachment 1, "Facility Design (Container Specifications)".

7. Outside storage devices:

S001	Solder	All solder dross drums are stored indoors.
S002	GRS	All hazardous wastes solutions are stored indoors.
S003	Ion Exchange	These are stored in a roofed enclosure.
S004	Shed	This is a building that encloses the hazardous wastes being stored there.
S005	WTS	The two cone tanks of the WTS are stored in a roofed enclosure.
Empty Drums Storage		Empty drums are rinsed and stored outdoors in a designated area.

8. Storage device liners:

The only containers with a liner are the 30- and 55-gallon steel drums, which have poly liners. When the drum and the liner are no longer of use, they are disposed of as hazardous waste or as empty containers.

9. Container tracking:

Containers and wastes for storage management devices are tracked from receiving to off-site shipment in the following way:

Hazardous waste is received by using hazardous waste profiles and screening through phone calls. Once received, the pH is checked to ensure that it is a compatible waste and the waste is assigned a unique log number or sample lot number. The profile is used to ensure that the waste is one that is permitted at this facility. For off-site shipping, use a Uniform Hazardous Waste Manifest.

10. Waste identification

After the waste has been confirmed as that which is listed on the manifest, it is then sent to storage and/or for processing. The waste is logged before being place into the process equipment by identifying the lot and the treatment unit number. The waste may be commingled for treatment purposes, but is logged with each step of treatment.

Wastes (except for the water loss to evaporation) are logged each step of processing and/or until it is shipped off-site as hazardous waste.

11. Inspection of storage devices

There are daily and weekly inspections of all of the hazardous waste storage areas, and of the tanks and containers used to store and treat the hazardous wastes. These inspections logs and the inspection plan can be reviewed in the attached "J&B Enterprises, Written Safety Plan" a copy of which can be found in Section VI, Facility Training.

Notes:

A minimum of 30" of storage space will be maintained between storage devices (containers) at all times, except those that are stored in double rows, per the current permit. Hazardous wastes that are reactive are located more than 50' from the property boundary. There is no ignitable hazardous waste accepted at the facility. Incompatible wastes, and incompatible wastes and materials are not stored in the same storage device.

A storage device holding a hazardous waste that is incompatible with any waste or other materials transferred or stored nearby in containers or tanks shall be separated from the other materials or protected from them by means of a dike, berm, wall, or other device. The Acid Wash/Fume Hood was installed for the purpose of processing the precipitation mud.

B. HAZARDOUS WASTES STORED

Each hazardous waste that is or will be stored in each area will be described with all of the following information:

1. Common waste chemical name(s)
2. EPA and/or California hazardous waste number(s)
3. Specific gravity
4. Vapor pressure, if applicable
5. Flame point/auto-ignition temperature, if applicable
6. pH
7. Color –not applicable

See Section III, Tables 2, 3, and 4, which contain all of the above information.

Section III, Table 2, "Description of Hazardous" provides the waste stream number, waste stream name, EPA and California Waste Codes, description of the waste, and source or process generating the waste.

Section III, Table 3, "Physical Properties of Waste" provides the waste stream number, waste stream name, specific gravity, pH range, and flash point. Note: Color is not used as a screen or indicator as it is an unreliable method due to the wide variation and change.

Section III, Table 4, "Hazardous Waste Properties of Waste – Off-Site Generated" and "Hazardous Waste Properties of Waste – On-Site Generated" provide the waste stream number, waste stream names, potential hazardous constituents, ignitability, corrosive, reactivity, toxicity, and incompatibility data.

C. STORAGE DEVICE EQUIPMENT DESCRIPTION

List all devices/equipment to be used in each storage area, including containers, totes, bags, tanks, reactors, vats, etc. Describe the following if they apply to the equipment (excluding DOT-drums):

1. Internal and/or external dimensions in feet and inches
2. Internal design capacity in gallons
3. Age of each tank (new or from the operating records of the facility)

4. If the equipment will be coated or lined, describe the lining and/or coating material and thickness used inside or outside.

See Section IV, Attachment 1 " Facility Design (Container Specifications Sheets)". There is an information sheet prepared for each type of container used at the facility.

Section IV, Attachment 1, " Facility Design (Container Specifications Sheets)" discusses container use and storage practices.

- Section A of this attachment describes each type of container used for hazardous waste.
- Section B of this attachment describes the procedures for the storage and uses of the containers.
- Section C of this attachment gives the specifics of each designated storage area and the engineering certification information.
- Section D reviews treatment in containers.
- Section E reviews Ignitable, Corrosive, and Reactive Wastes in containers.

Also see Section V, Facility Design (Treatment), Attachment 1 "Facility Design (Tanks)" There is a section prepared for each permitted tank or piece of equipment used at the facility This section discusses the treatment tanks and equipment used at J&B Enterprises. It specifically covers all of the treatment units (Concentrators, Precipitation Tanks, Electrowinning, Wastewater Treatment System, Crucible Furnace, and Evaporator Tank).

D. SECONDARY CONTAINMENT DESIGN

All of the storage areas (S001, S002, S003, S004, and S005) and all hazardous waste treatment equipment have secondary containment. This information is detailed in Section IV, Attachment 1 and Section V, Attachment 1, along with the engineering certification information provided in Section II, Attachment 14, "Architectural and Engineering Drawings and Reports", sub-attachments 14.1 – 14.7.

14.1 Freitas + Freitas Engineering and Planning Consultants, *"Tank System Assessments"*, November 24, 2010 (17 pages)

14.2 Robinson and Associates, *"J&B Enterprises, 1650 Russell Avenue, Santa Clara Design Certification of Hazardous Waste Treatment and Storage Facility"*, July 10, 2001 (25 pages)

14.3 Habitec Architectural & Planning, *"J&B Enterprises T.I., Phase IV – Hazmat"* Plans, January 12, 2001 (7 pages)

14.4 T Square Consulting Group, Inc., *"Structural Calculations for J&B Enterprises, 1650 Russell Ave., Santa Clara, CA"*, August 21, 2003 (26 pages)

14.5 Shad Engineers, *"Structural Calculations for J&B Enterprises, 342 Laurelwood Ave., Santa Clara, CA"*, August 21, 2003 (6 pages)

14.6 California Environmental Management Service Co., Inc., *"UBC Containment Calculations for Hazardous Materials and Sprinkler Water"*, March 3, 2001 rev. (5 pages)

14.7 Tera Lite Inc., *"Tera-Gem III Troweled Chemical Resistance Floor System (CRS)"*, July 31, 2000 (22 pages)

E. STORAGE OF IGNITABLE, CORROSIVE, OR REACTIVE WASTE

The facility does not handle ignitable hazardous wastes. All hazardous waste storage and treatment is conducted inside of the building or in roofed enclosures and the storage areas are more than 50 feet distance from the property lines. See Section II, Attachment 5, "Facility Map" and Section II, Attachment 14 "Architectural and Engineering Details".

In addition, the bulk of the drum storage for the hazardous wastes is S002, in the precious metal recovery room which is an H2 Hazardous Occupancy with 1-hour fire resistant walls, and 2-hour fire resistant doors, emergency lighting and ventilation, general room exhaust (minimum 6 air changes per hour) and a backup generator that automatically operates if there is any power loss.

An additional nine containers of the reactive material are isolated and stored in a specially designed walk-in storage container (S004) that is secured with a lock and enclosed in a locked and secured area with 10' high fencing. This special storage container has built in secondary containment and ventilation.

All wastes are segregated for chemical compatibility, so no incompatible hazardous waste can accidentally mix and react. No acid corrosive wastes are accepted at the facility for storage, transfer, or treatment. There is a designated and physically isolated "acid" corrosive storage area in S003 for chemicals needed for resin regeneration and another small container stored in the Acid Wash/Fume Hood inside of S002.

S001 is the solder dross storage and that material is not reactive, ignitable, or corrosive.

S005 is the wastewater treatment system. This is an emergency treatment and storage area and is physically isolated from S003. No ignitable or acid corrosive wastes are stored or treated here.

F. SPECIFIC AIR EMISSIONS

J&B Enterprises has air quality permits from the Bay Area Air Quality Management District (BAAQMD) for the following:

Plant Number: 12625
Crucible Furnace, Application number 1311(Exempt)
Evaporator, Application number 1311
Concentrator Tanks, Application number 1655, (Exempt)
Two Strip Tanks, Application number 1311 (Exempt)
Purification Process – Water and Acid Washes, Application number 1311 (Exempt)
Reciprocating Engine, Cooled Gas Backup Engine Generator, Application number 5366
Waste Water Treatment System, Application number 1311 (Exempt)

Note: The BAAQMD was contacted regarding RCRA Subparts AA, BB, CC compliance. J&B's assigned permit engineer, Ms. Thu Bui, informed us that the District did not have a RCRA Subparts AA, BB, CC compliance requirement. Consultation with Region IX EPA

RCRA Inspector, Mr. Kaoru Morimoto, concurred with our review of the AA BB CC regulation that it does not apply to the wastes, equipment, or practices at J&B Enterprises. Air emission controls are not required for J&B storage tanks and containers.

G. ENGINEERS CERTIFICATIONS

An independent, qualified professional engineer registered in the State of California has prepared a tank integrity certification. The certification is in Section II, Attachment 14 "Architectural and Engineering Drawings and Reports"; specifically see Section II, Attachment 14 and refer to the following:

14.1 Freitas + Freitas Engineering and Planning Consultants, *"Tank System Assessments"*, November 24, 2010 (17 pages)

14.2 Robinson and Associates, *"J&B Enterprises, 1650 Russell Avenue, Santa Clara Design Certification of Hazardous Waste Treatment and Storage Facility"*, July 10, 2001 (25 pages)

H ENGINEERS QUALIFICATIONS

Same as G above. The engineers contracted to complete the certifications are registered professional engineers (PE's) in the State of California.

SECTION IV

ATTACHMENT 1 - FACILITY DESIGN (CONTAINERS)

July 2011

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A. CONTAINER TYPES – SPECIFICATION SHEETS

Sheet 1. Polyethylene Drums, 55-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below:

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Polyethylene drums

   b. Total number of this type of container: Varies, up to 1,000.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties:

      EPA hazardous waste label and a DOT "Poison" or "Class 9" label

   d. Materials of construction: Polyethylene

   e. Dimensions and volumes: 55-gallon capacity drums, 1.8' (d) x 3' (h)

   f. DOT specifications or other manufacturer's specifications: UN1H1/Y1.5

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Aqueous solutions with cyanide and precious metals (Waste #1)
      Non-reactive dragout solutions (Waste #2)
      Non-cyanide precious metal solutions, non-acidic (Waste #3)
      Iodine etch solutions (Waste #4)
      Photographic solutions with silver (Waste #7)
      Cyanide strip solution (Waste #8)
      Lean liquor solution (Waste #10)
      Neutralized acid solution (Waste #12)
      Wastewater without cyanide (Waste #13)
      Resin regenerate solution, neutralized (Waste #19)

b. EPA hazardous waste number(s):
(Note: An italicized code number indicates new secondary waste code added.)

Waste #1	F007, F009, D002, D003, D004, D006, D007, D008, D011, *F006, F008*
Waste #2	F007, F009, D004, D006, D007, D008, D011, *F008, F009*
Waste #3	nonRCRA or D002, D004, D006, D007, D008, D010, D011, *D009, D010*
Waste #4	nonRCRA
Waste #7	D007, D011
Waste #8	D002, D003, D004, D006, D007, D008, D011, *D009, D010, F009*
Waste #10	F007, F009, D002, D003, D004, D006, D007, D008, D011
Waste #12	F007, F009, D004, D006, D007, D008, D011
Waste #13	F007, F009, D002, D004, D006, D007, D008, D011
Waste #19	F007, F009, D004, D006, D007, D008, D011

3. If over-packing material is used, give the common name of the material used in each container, 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   A properly completed EPA hazardous waste label and a DOT "Poison" label, as appropriate will be used. As an exception, some of the wastes listed above will be marked with a "Class 9" label instead.

Will hazardous waste be transported in containers?

YES__X__ NO_____. If yes, complete the section below.

1. The containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173,178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The precious metal-cyanide bearing plating, stripping, and dragout solutions are all Packing Group 3 materials; some concentrated solutions are Packing Group 2. The gold iodine etches, and silver photo solutions are Packing Group 3 materials.. The DOT shipping descriptions for each of the above listed waste types authorize the use of 1H1 containers (plastic drums). DOT specification UN 1H1/Y container is acceptable for these types of wastes.

Sheet 2. Polyethylene Drums, 30-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Polyethylene drums

   b. Total number of this type of container: Varies, up to 200.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties: EPA hazardous waste label and a DOT "Poison" or "Class 9" label

   d. Materials of construction: Polyethylene

   e. Dimensions and volumes: 33-gallon capacity drums, 1.5' (d) x 2.5' (h)

   f. DOT specifications or other manufacturer's specifications: UN1H1/Y1.2

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Aqueous solutions with cyanide and precious metals (Waste #1)
      Non-reactive dragout solutions (Waste #2)
      Non-cyanide precious metal solutions, non-acidic (Waste #3)
      Iodine etch solutions (Waste #4)
      Photographic solutions with silver (Waste #7)
      Neutralized acid solution (Waste #12)

   b. EPA hazardous waste number(s):
      (Note: An italicized code number indicates new secondary waste code added.)

Waste #1	F007, F009, D002, D003, D004, D006, D007, D008, D011, *F006, F008*
Waste #2	F007, F009, D004, D006, D007, D008, D011, *F008, F009*
Waste #3	nonRCRA or D002, D004, D006, D007, D008, D010, D011, *D009, D010*

Waste #4	nonRCRA
Waste #7	D007, D011
Waste #12	F007, F009, D004, D006, D007, D008, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties (per 22CCR 66270.14(b)(19))?

   A properly completed EPA hazardous waste label and a DOT "Poison" label, as appropriate will be used. As an exception, some of the wastes listed above will be marked with a "Class 9" label instead.

Will hazardous waste be transported in containers?

YES__X__ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The precious metal-cyanide bearing plating, stripping, and dragout solutions are all Packing Group 3 materials; some concentrated solutions are Packing Group 2. The gold iodine etches, and silver photo solutions are Packing Group 3 materials. The DOT shipping descriptions for each of the above listed waste types authorize the use of 1H1 containers (plastic drums). DOT specification UN 1H1/Y container is acceptable for these types of wastes.

Sheet 3. Polyethylene Drums, 15-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES X NO _____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Polyethylene drums

   b. Total number of this type of container: Varies, up to 200.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties:

      EPA hazardous waste label and a DOT "Poison" or "Class 9" label

   d. Materials of construction: Polyethylene

   e. Dimensions and volumes: 15-gallon capacity drums, 1.2' (d) x 1.8' (h)

   f. DOT specifications or other manufacturer's specifications: UN1H1/Y1.2

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Aqueous solutions with cyanide and precious metals (Waste #1)
      Non-reactive dragout solutions (Waste #2)
      Non-cyanide precious metal solutions, non-acidic (Waste #3)
      Iodine etch solutions (Waste #4)
      Photographic solutions with silver (Waste #7)
      Neutralized acid solution (Waste #12)

   b. EPA hazardous waste number(s):
      (Note: An Italicized code number indicates new secondary waste code added.)

      Waste #1 F007, F009, D002, D003, D004, D006, D007, D008, D011, *F006, F008*
      Waste #2 F007, F009, D004, D006, D007, D008, D011, *F008, F009*

Waste #3	nonRCRA or D002, D004, D006, D007, D008, D010, D011, *D009, D010*
Waste #4	nonRCRA
Waste #7	D007, D011
Waste #12	F007, F009, D004, D006, D007, D008, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   A properly completed EPA hazardous waste label and a DOT "Poison" label, as appropriate will be used. As an exception, some of the wastes listed above will be marked with a "Class 9" label instead.

Will hazardous waste be transported in containers?

YES__X__ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The precious metal-cyanide bearing plating, stripping, and dragout solutions are all Packing Group 3 materials; some concentrated solutions are Packing Group 2. The gold iodine etches, and silver photo solutions are Packing Group 3 materials. The DOT shipping descriptions for each of the above listed waste types authorize the use of 1H1 containers (plastic drums). DOT specification UN 1H1/Y container is acceptable for these types of wastes.

Sheet 4. Plastic Jerry Cans, 5-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Plastic Jerry Cans/Containers

   b. Total number of this type of container: Varies, up to 100.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties:

      EPA hazardous waste label and a DOT "Poison" or "Class 9" label

   d. Materials of construction: Polyethylene

   e. Dimensions and volumes: 6.5-gallon capacity, 0.8' x 0.9' x 1.25' (h)

   f. DOT specifications or other manufacturer's specifications: UN1H1/Y1.2

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Aqueous solutions with cyanide and precious metals (Waste #1)
      Non-reactive dragout solutions (Waste #2)
      Non-cyanide precious metal solutions, non-acidic (Waste #3)
      Iodine etch solutions (Waste #4)
      Photographic solutions with silver (Waste #7)
      Neutralized acid solution (Waste #12)

   b. EPA hazardous waste number(s):
      (Note: An italicized code number indicates new secondary waste code added.)

      Waste #1 F007, F009, D002, D003, D004, D006, D007, D008, D011, *F006, F008*
      Waste #2 F007, F009, D004, D006, D007, D008, D011, *F008, F009*

Waste #3	nonRCRA or D002, D004, D006, D007, D008, D010, D011, *D009, D010*
Waste #4	nonRCRA
Waste #7	D007, D011
Waste #12	F007, F009, D004, D006, D007, D008, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   Properly completed EPA hazardous waste labels and a DOT "Poison". As an exception, some of the wastes listed above will be marked with a "Class 9" label instead.

Will hazardous waste be transported in containers?

YES__X__ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The precious metal-cyanide bearing plating, stripping, and dragout solutions are all Packing Group 3 materials; some concentrated solutions are Packing Group 2. The gold iodine etches, and silver photo solutions are Packing Group 3 materials. The DOT shipping descriptions for each of the above listed waste types authorize the use of 1H1 containers (plastic drums). DOT specification 1H1/Y container is acceptable for these types of wastes.

Sheet 5. Metal Drums with Removable Heads and Liners, 55-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Metal drums with removable heads

   b. Total number of this type of container: Varies, up to 50.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties:

      EPA hazardous waste label and DOT "Poison" or Class 9 label

   d. Materials of construction: Steel

   e. Dimensions and volumes: 55-gallon capacity, 1.9' (d) x 2.8' (h)

   f. DOT specifications or other manufacturer's specifications: UN1A2/Y1.2

   g. Liner specifications (if applicable): Plastic, 38" x 64"; 4 mil

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Residues containing precious metals (Waste #5)
      Solder dross (Waste #6)
      Filter cake (Waste #14)
      Evaporator solids (Waste #20)

   b. EPA hazardous waste number(s):
      (Note: An italicized code number indicates new secondary waste code added.)

Waste #5	F006, F007, F008, F009, D002, D003, D004, D006, D007, D008, D011, *D009, D010*
Waste #6	D004, D006, D008, D011
Waste #14	F006, F007, F009, D002, D004, D006, D007, D008, D010, D011
Waste #20	F007, F009, D002, D003, D004, D006, D007, D008, D010, D011, *F006, F008*

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   A properly completed EPA hazardous waste label and a DOT "Poison" label, as appropriate will be used. As an exception, some of the wastes listed above will be marked with a "Class 9" label instead

Will hazardous waste be transported in containers?

YES__X__ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The spent filters, wipes, and empty containers are all Packing Group 3 materials, as are the filter cakes and solder dross waste. The DOT shipping descriptions for these waste types authorizes the use of 1A2 containers (metal drums with removable heads). DOT specification UN 1A2/Y container is acceptable for these types of wastes.

Sheet 6. Polyethylene Drums with Removable Heads, 55-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Plastic drums with removable heads

   b. Total number of this type of container: Varies, up to 100.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties: EPA hazardous waste label and DOT "Poison" label

   d. Materials of construction: Polyethylene

   e. Dimensions and volumes: 54-gallon capacity, 1.75' (d) x 3' (h)

   f. DOT specifications or other manufacturer's specifications: UN1H2/Y

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s): Residues containing precious metals (Waste #5)

   b. EPA hazardous waste number(s):
   (Note: An italicized code number indicates new secondary waste code added.)

   Waste #5 F006, F007, F008, F009, D002, D003, D004, D006, D007, D008, D011, *D009, D010*

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   Properly completed EPA hazardous waste label and a DOT "Poison" label

Will hazardous waste be transported in containers?

YES__X__ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The spent filters, wipes, and empty containers are all Packing Group 3 materials. The DOT shipping descriptions for this waste type authorizes the use of 1H2 containers (metal drums with removable heads). DOT specification UN 1H2/Y container is acceptable for these types of wastes.

Sheet 7. Polyethylene Drums with Removable Heads, 30-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X___ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Plastic drums with removable heads

   b. Total number of this type of container: Varies, up to 100.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties: EPA hazardous waste label and DOT "Poison" label

   d. Materials of construction: Polyethylene

   e. Dimensions and volumes: 33-gallon capacity, 1.5' (d) x 2.5' (h)

   f. DOT specifications or other manufacturer's specifications: UN1H2/Y

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name: Residues containing precious metals (Waste #5)

   b. EPA hazardous waste number(s):
   (Note: An italicized code number indicates new secondary waste code added.)

   Waste #5 F006, F007, F008, F009, D002, D003, D004, D006, D007, D008, D011, *D009, D010*

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   Properly completed EPA hazardous waste label and a DOT "Poison" label

Will hazardous waste be transported in containers?

YES__X___ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The spent filters, wipes, other solid materials and debris, and empty containers are all Packing Group 3 materials. The DOT shipping descriptions for this waste type authorizes the use of 1H2 containers (metal drums with removable heads). DOT specification UN 1H2/Y container is acceptable for these types of wastes.

Sheet 8. Metal Drums with Removable Heads, 55-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X___ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Metal drums with removable heads

   b. Total number of this type of container: Varies, up to 1,000.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties: EPA hazardous waste label and a DOT "Class 9" label

   d. Materials of construction: Steel

   e. Dimensions and volumes: 55-gallon capacity, 1.9' (d) x 2.8' (h)

   f. DOT specifications or other manufacturer's specifications: UN1A2/Y1.2

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j), 66270.14(b)(19):

   a. Common name(s):

      Solder dross (Waste #6)
      Filter cake (Waste #14)

   b. EPA hazardous waste number(s):
      (Note: An italicized code number indicates new secondary waste code added.)

      Waste #6 D004, D006, D008, D011
      Waste #14 F006, F007, F009, D002, D004, D006, D007, D008, D010, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   EPA hazardous waste label and a DOT "Class 9" label

Will hazardous waste be transported in containers?

YES__X___ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The solder dross and filter cake waste are both Packing Group 3 materials. The DOT shipping descriptions for this waste type authorizes the use of 1A2 containers (metal drums with removable heads). DOT specification UN 1A2/Y container is acceptable for this waste type.

Sheet 9. Metal Drums with Removable Heads, 30-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Metal drums with removable heads

   b. Total number of this type of container: Varies, up to 1,000 (counting both empty and full containers).

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties: EPA hazardous waste label and a DOT "Class 9" label

   d. Materials of construction: Steel

   e. Dimensions and volumes: 31-gallon capacity, 1.5' (d) x 2.375' (h)

   f. DOT specifications or other manufacturer's specifications: UN1A2/Y

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j), 66270.14(b)(19):

   a. Common name(s):

   Tin/Lead Solder dross (Solder Dross or Solder) (Waste #6)
   Filter cake (Waste #14)

   b. EPA hazardous waste number(s):

   Waste #6 D004, D006, D008, D011
   Waste #14 F006, F007, F009, D002, D004, D006, D007, D008, D010, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   EPA hazardous waste label and a DOT "Class 9" label

Will hazardous waste be transported in containers?

YES__X__ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The solder dross is a Packing Group 3 material. The DOT shipping descriptions for this waste type authorizes the use of 1A2 containers (metal drums with removable heads). DOT specification UN 1A2/Y container is acceptable for this waste type.

Sheet 10. Metal Drums with Removable Heads, 15-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Metal drums with removable heads

   b. Total number of this type of container: Varies, up to 100.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties: EPA hazardous waste label and a DOT "Class 9" label

   d. Materials of construction: Steel

   e. Dimensions and volumes: 14-gallon capacity, 1.2' (d) x 1.7' (h)

   f. DOT specifications or other manufacturer's specifications: UN1A2/Y

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

   Tin/Lead Solder dross (Solder Dross or Solder) (Waste #6)
   Filter cake (Waste #14)

   b. EPA hazardous waste number(s):

   Waste #6 D004, D006, D008, D011
   Waste #14 F006, F007, F009, D002, D004, D006, D007, D008, D010, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19):

   EPA hazardous waste label and DOT "Class 9" label

Will hazardous waste be transported in containers?

YES__**X**__ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The solder dross and filter cake are both Packing Group 3 materials. The DOT shipping descriptions for these waste types authorizes the use of 1A2 containers (metal drums with removable heads). DOT specification UN 1A2/Y container is acceptable for this waste type.

Sheet 11. Pyrex Jugs, 5-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Pyrex jugs

   b. Total number of this type of container: Varies, up to 10.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties:

      EPA hazardous waste label, and either "CYANIDE" or "Nitric acid" marking, as appropriate

   d. Materials of construction: Pyrex glass

   e. Dimensions and volumes: 6-gallon capacity; 0.875' (d) x 1.29' (h) plus neck

   f. DOT specifications or other manufacturer's specifications: Pyrex #1595, 5-gallons

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Lean liquor/Water wash (Waste #10)
      Acid purification solution (Waste #11)

   b. EPA hazardous waste number(s):
      (Note: An Italicized code number indicates new secondary waste code added.)

      Waste #10 F007, F009, D002, D003, D004, D006, D007, D008, D011
      Waste #11 F007, F009, D002, D004, D006, D007, D008, D011, *D009, F008*

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   EPA hazardous waste label, and either "Cyanide" or "Nitric Acid" marking, as appropriate

Will hazardous waste be transported in containers?

YES_____ NO___**X**___. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   Not applicable, there is no transportation of these containers.

Sheet 12. Plastic Buckets, 5-Gallon

Are containers used to transfer, treat, or store hazardous waste?

YES__X___ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Plastic buckets

   b. Total number of this type of container: Varies, up to 10.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties: EPA hazardous waste label and "Cyanide" marking

   d. Materials of construction: Polyethylene

   e. Dimensions and volumes: 5.43-gallon capacity; 0.463' (r) x 1.20' (h)

   f. DOT specifications or other manufacturer's specifications:
   NRC 0.090 HDPE; models vary but will be DOT approved or an equivalent standard.

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name: Precious metal precipitate (Waste #9)

   b. EPA hazardous waste number(s):
   Waste #9 F007, F009, D004, D006, D007, D008, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   EPA hazardous waste label and "Cyanide" marking

Will hazardous waste be transported in containers?

YES_____ NO___X__. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   Not applicable, as there is no transportation of these containers.

Sheet 13. Polyethylene Containers, 100-Gallon, Open-Top

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste: 22CCR 66270.14(b)(19) and 66265.170

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Open-top polyethylene container

   b. Total number of this type of container: Varies, up to 4.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties:

      EPA hazardous waste label. The container used for the pH neutralization of the resin regeneration solution is marked with a DOT "Corrosive" label. Alternatively, the containers used for metals precipitation and settling as part of the GRS are marked with a DOT "Poison" label.

   d. Materials of construction: Linear Polyethylene, 0.25"

   e. Dimensions and volumes: Internal: 104-gallon capacity; 2.25' (d) x 3.5' (h)

   f. DOT specifications or other manufacturer's specifications:

      This container is not used for shipping and does not have a DOT specification number. The manufacturer's specification is as follows: Ryan Herco model 7110-020

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Aqueous solutions with cyanide and precious metals (Waste #1)
      Non-reactive dragout solutions (Waste #2)
      Non-cyanide precious metal solutions, non-acidic (Waste #3)
      Iodine etch solutions (Waste #4)
      Cyanide strip solution (Waste #8)

Resin regeneration solution, acidic (Waste #16)
Resin regeneration solution, caustic (Waste #17)
Resin regeneration solution, neutralized (Waste #19)

b. EPA hazardous waste number(s):
(Note: An italicized code number indicates new secondary waste code added.)

Waste #1	F007, F009, D002, D003, D004, D006, D007, D008, D011, *F006, F008*
Waste #2	F007, F009, D004, D006, D007, D008, D011, *F008, F009*
Waste #3	nonRCRA or D002, D004, D006, D007, D008, D010, D011, *D009, D010*
Waste #4	nonRCRA
Waste #8	D002, D003, D004, D006, D007, D008, D011, *D009, D010, F009*
Waste #16	F007, F009, D002, D004, D006, D007, D008, D011
Waste #17	F007, F009, D002, D004, D006, D007, D008, D011
Waste #19	F007, F009, D004, D006, D007, D008, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   EPA hazardous waste label. The container used for the pH neutralization of the resin regeneration solution is marked with a DOT "Corrosive" label. Alternatively, the containers used for metals precipitation and settling as part of the GRS are marked with a DOT "Poison" label.

<u>Will hazardous waste be transported in containers?</u>

YES_____ NO__**X**__. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   Not applicable, as there is no transportation of these containers.

Sheet 14. Polyethylene Containers, 50-Gallon, Open-Top

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Open-top polyethylene container

   b. Total number of this type of container: Varies, up to 3.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties: EPA hazardous waste label and a DOT "Poison" label

   d. Materials of construction: Linear Polyethylene, 0.25"

   e. Dimensions and volumes: Internal: 56-gallon capacity; 1.83' (d) x 2.83' (h)

   f. DOT specifications or other manufacturer's specifications:

      This container is not used for shipping and does not have a DOT specification number. The manufacturer's specification is as follows: Ryan Herco model 7110-020

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19).

   a. Common name(s):

      Aqueous solutions with cyanide and precious metals (Waste #1)
      Non-reactive dragout solutions (Waste #2)
      Non-cyanide precious metal solutions, non-acidic (Waste #3)
      Iodine etch solutions (Waste #4)
      Cyanide strip solution (Waste #8)

   b. EPA hazardous waste number(s):
      (Note: An Italicized code number indicates new secondary waste code added.)

      Waste #1 F007, F009, D002, D003, D004, D006, D007, D008, D011, *F006, F008*
      Waste #2 F007, F009, D004, D006, D007, D008, D011, *F008, F009*

Waste #3	nonRCRA or D002, D004, D006, D007, D008, D010, D011, *D009, D010*
Waste #4	nonRCRA
Waste #8	D002, D003, D004, D006, D007, D008, D011, *D009, D010, F009*

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   EPA hazardous waste label and a DOT "Poison" label

Will hazardous waste be transported in containers?

YES_____ NO___X___. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   Not applicable, as there is no transportation of these containers.

Sheet 15. Polyethylene Containers, 30-Gallon, Open-Top

Are containers used to transfer, treat, or store hazardous waste?

YES__X___ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste: 22CCR 66270.14(b)(19) and 66265.170

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Open-top polyethylene drum

   b. Total number of this type of container: Varies, up to 10.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties:

      EPA hazardous waste label and "Nitric acid" marking and DOT "Corrosive" label

   d. Materials of construction: Polyethylene - molded

   e. Dimensions and volumes: 27.7-gallon capacity; 1.4' (d) x 2.4' (h), plus lip

   f. DOT specifications or other manufacturer's specifications:

      These containers are not used for shipping and do not have a DOT specification number. The manufacturer's specification is as follows: Ryan Herco, model 7110-006

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Acid purification solution (Waste #11)
      Neutralized acid purification solution (Waste #12)

   b. EPA hazardous waste number(s):
      (Note: An italicized code number indicates new secondary waste code added.)

      Waste #11 F007, F009, D002, D004, D006, D007, D008, D011
      Waste #12 F007, F009, D004, D006, D007, D008, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   EPA hazardous waste label and "Nitric acid" marking and DOT "Corrosive" label

Will hazardous waste be transported in containers?

YES_____ NO___X___. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   Not applicable, as there is no transportation of these containers.

Sheet 16. Polyethylene Containers, 15-Gallon, Open-Top

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Open-top polyethylene drum

   b. Total number of this type of container: Varies, up to 10.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties:

      EPA hazardous waste label and "Nitric acid" marking and DOT "Corrosive" label

   d. Materials of construction: Polyethylene - molded

   e. Dimensions and volumes: 15-gallon capacity; 1.2' (d) x 1.75' (h)

   f. DOT specifications or other manufacturer's specifications:

      These containers are not used for shipping and do not have DOT specification numbers. The manufacturer's specification is as follows: Ryan Herco, model 7110-003

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Acid purification solution (Waste #11)
      Neutralized acid purification solution (Waste #12)

   b. EPA hazardous waste number(s):
      (Note: An Italicized code number indicates new secondary waste code added.)

      Waste #11 F007, F009, D002, D004, D006, D007, D008, D011, *D009, F008*
      Waste #12 F007, F009, D004, D006, D007, D008, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   EPA hazardous waste label and "Nitric acid" marking and DOT "Corrosive" label

Will hazardous waste be transported in containers?

YES_____ NO__X__. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   Not applicable, as there is no transportation of these containers.

Sheet 17. Fiberboard Box with Liner, IBC, 1 Cubic Yard

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Fiberboard box with liner

   b. Total number of this type of container: Varies, up to 2.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties: EPA hazardous waste label and a DOT "Class 9" label

   d. Materials of construction: A triple-walled corrugated fiberboard construction with integrated reinforcing filament strands

   e. Dimensions and volumes: 202-gallon capacity; 3' (w) x 3' (d) x 3' (h)

   f. DOT specifications or other manufacturers' specifications: UN11G/Y

   g. Liner specifications (if applicable): 6 mil, linear, low-density polyethylene bag liner

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19).

   a. Common name(s): Filter cake (Waste #14)

   b. EPA hazardous waste number(s):
   Waste #14 F006, F007, F009, D002, D004, D006, D007, D008, D010, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   EPA hazardous waste label and DOT "Class 9" label

Will hazardous waste be transported in containers?

YES__X___ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The filter cake waste is a Packing Group 3 material. The DOT shipping descriptions for these waste types authorizes the use of 11G, IBC containers (fiberboard boxes). DOT specification UN 11G/Y container is acceptable for this waste type.

Sheet 18. Filter Press

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Filter press

   b. Total number of this type of container: 1

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties: "Hazardous waste" and "filter press" markings

   d. Materials of construction: Metals and plastics.

   e. Dimensions and volumes: Not applicable, this is a piece of equipment.

      Irregularly shaped
      The maximum container capacity is 3 cubic feet, or 22.5 gallons, per manufacturer's specifications.

   f. DOT specifications or other manufacturers' specifications:

      These containers are not used for shipping and do not have DOT specification numbers. The manufacturer's specification is as follows: JWI Filter Press, Mod. No. 630G32-21/36-6/10 DYLS

g. Liner specifications (if applicable): None

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Wastewater sludge without cyanide (Waste #13)
      Filter cake (Waste #14)
      No hazardous wastewater effluent (Waste #15)

b. EPA hazardous waste number(s):

Waste #13	F006, F007, F009, D004, D006, D007, D008, D011
Waste #14	F006, F007, F009, D002, D004, D006, D007, D008, D010, D011
Waste #15	No hazardous

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   "Hazardous Waste" and "Filter Press" markings

Will hazardous waste be transported in containers?

YES_____ NO__X___. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   Not applicable, as there is no transportation of these containers.

Sheet 19. Ion Exchange Columns

Are containers used to transfer, treat, or store hazardous waste?

YES__X___ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170.

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Ion Exchange Columns.

   b. Total number of this type of container: 4

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties:

      "Ion Exchange Columns" markings. A "Corrosive - Acid" marking will be affixed to the columns and entrances to this treatment area when the units are being back-flushed with acid.

   d. Materials of construction: Fiberglass reinforced plastic with a rubber base

   e. Dimensions and volumes: 32-gallon capacity; 14" (d) x 48" (h)

   f. DOT specifications or other manufacturers' specifications:

      This container is not used for shipping and does not have a DOT specification number. The manufacturer's specification is as follows: Ionic, model 3.6 MB DI Portable Exchange Mixed Bed Deionization Columns

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Nonhazardous wastewater effluent (Waste #15)
      Resin regenerate solution, acidic (Waste #16)
      Resin regenerate solution, caustic (Waste #17)
      Spent ion exchange resin (Waste #18)

b. EPA hazardous waste number(s):

Waste #15	Nonhazardous
Waste #16	F007, F009, D002, D004, D006, D007, D008, D011
Waste #17	F007, F009, D002
Waste #18	F007, F009, D002, D004, D006, D007, D008, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14(b)(19)?

   Ion Exchange Columns markings: A "Corrosive - Acid" marking will be affixed to the columns and to the entrances to this treatment area when the units are being back-flushed with acid.

Will hazardous waste be transported in containers?

YES_____ NO__X___. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   Not applicable; there is no shipping of hazardous waste or materials in these containers.

Sheet 20. IBC Polyethylene Containers

Are containers used to transfer, treat, or store hazardous waste?

YES__X__ NO_____. If yes, complete the section below.

1. Information about the containers used to transfer, treat, or store hazardous waste, per 22CCR 66270.14(b)(19) and 66265.170:

   a. Type of container (e.g. metal drums, polyethylene drums, plastic buckets, etc.): Polyethylene IBC (Intermediate Bulk Container)

   b. Total number of this type of container: Varies, up to 20.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties:

      EPA hazardous waste label and a DOT "Poison" or "Class 9" label

   d. Materials of construction: Polyethylene

   e. Dimensions and volumes:
      270- to 330-gallon capacity, varies in size, 3' (w) x 3' (d) x 3' (h)

   f. DOT specifications or other manufacturers' specifications:
      31H2/Y/date/USA or DOT equivalent

   g. Liner specifications (if applicable): Not applicable, there is no liner.

2. Information about the hazardous waste that will be treated or stored in each of the above containers, per 22CCR 66270.13(j) and 66270.14(b)(19):

   a. Common name(s):

      Aqueous solutions with cyanide and precious metals (Waste #1)
      Non-reactive dragout solutions (Waste #2)
      Non-cyanide precious metal solutions, non-acidic (Waste #3)
      Iodine etch solutions (Waste #4)
      Photographic solutions with silver (Waste #7)
      Cyanide strip solution (Waste #8)
      Lean liquor solution (Waste #10)
      Neutralized acid solution (Waste #12)
      Wastewater without cyanide (Waste #13)
      Resin regenerate solution, neutralized (Waste #19)

b. EPA hazardous waste number(s):
(Note: An Italicized code number indicates new secondary waste code added.)

Waste #1	F007, F009, D002, D003, D004, D006, D007, D008, D011, *F006, F008*
Waste #2	F007, F009, D004, D006, D007, D008, D011, *F008, F009*
Waste #3	nonRCRA or D002, D004, D006, D007, D008, D010, D011, *D009, D010*
Waste #4	nonRCRA
Waste #7	D007, D011
Waste #8	D002, D003, D004, D006, D007, D008, D011, *D009, D010, F009*
Waste #10	F007, F009, D002, D003, D004, D006, D007, D008, D011
Waste #12	F007, F009, D004, D006, D007, D008, D011
Waste #13	F007, F009, D002, D004, D006, D007, D008, D011
Waste #19	F007, F009, D004, D006, D007, D008, D011

3. If over-packing material is used, give the common name of the material used in each container, per 22CCR 66270.14(b)(19): Not applicable, none used.

4. What type of labels or markings will be used on the containers to identify the hazardous waste contents and properties, per 22CCR 66270.14 (b) (19)?

   A properly completed EPA hazardous waste label and a DOT "Poison" label, as appropriate will be used. As an exception, some of the wastes listed above will be marked with a "Class 9" label instead.

Will hazardous waste be transported in containers?

YES__X__ NO_____. If yes, complete the section below.

1. Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported, per 22CCR 66262.30.

   The precious metal-cyanide bearing plating, stripping, and dragout solutions are all Packing Group 3 materials; some concentrated solutions are packing group 2. The gold iodine etches, and silver photo solutions are packing group 3 materials. The DOT shipping descriptions for each of the above listed waste and 31H2/Y/date/USA container is acceptable for these types of wastes.

B. OPERATION PROCEDURES FOR STORAGE AND USE OF CONTAINERS

1. Describe how hazardous wastes inside of containers in poor condition are transferred into good containers or otherwise managed (e.g., over-packed), to prevent any spills, leaks or releases, per 22CCR 66270.14(b)(19), 66264.171, and 66265.171.

Hazardous wastes stored in containers that are in poor condition will be manually transferred to clean containers in good condition by pouring or by using a drum pump; small quantities of solid "hazardous waste" will be transferred by hand. Hazardous waste stored in containers in poor condition may be over-packed into a good container. All areas used for storage or treatment of hazardous wastes in containers will be inspected on a daily basis when in operation, in order to help detect leaking, damaged or poor containers.

2. To ensure compatibility of waste with containers, per 22CCR 66270.14(b)(19), 66264.172, and 66265.172.

a. Identify the hazardous waste in each type of container.

Container (Sheet #)	*Waste ID#*
Poly drums, 55-gallon (Sheet 1)	1, 2, 3, 4, 7, 8, 10, 12, 13, 19
Poly drums, 30-gallon (Sheet 2)	1, 2, 3, 4, 7, 12
Poly drums, 15-gallon (Sheet 3)	1, 2, 3, 4, 7, 12
Plastic jerry cans, 5-gallon (Sheet 4)	1, 2, 3, 4, 7, 12
Metal drums, 55-gallons, lined, w/removable heads (Sheet 5)	5, 6, 14
Poly drums, 55-gallon, w/removable heads (Sheet 6)	5
Poly drums, 30-gallon, w/removable heads (Sheet 7)	5
Metal drums, 55-gallon, w/removable heads (Sheet 8)	6, 14
Metal drums, 30-gallon, w/removable heads (Sheet 9)	6, 14
Metal drums, 15-gallon, w/removable heads (Sheet 10)	6, 14
Pyrex jugs, 5-gallon (Sheet 11)	10, 11
Plastic buckets, 5-gallon (Sheet 12)	9
Poly containers, 100-gallon, open-top (Sheet 13)	1, 2, 3, 4, 8, 16, 17, 19
Poly containers, 50-gallon, open-top (Sheet 14)	1, 2, 3, 4, 8
Poly containers, 30-gallon, open-top (Sheet 15)	11, 12
Poly containers, 15-gallon, open-top (Sheet 16)	11, 12
Fiberboard box w/liner, IBC 1 cubic yard (Sheet 17)	14
Filter press (Sheet 18)	13, 14
Ion exchange columns (Sheet 19)	15, 16, 17, 18
IBC (Intermediate Bulk Container), 330-gallon (Sheet 20)	1, 2, 3, 4, 7, 8, 10, 12, 13, 19

b. For each type of container and liner (if applicable), include information from manufacturer's specification, and scientific and engineering references to show that the containers, liners or coatings are compatible with the hazardous wastes stored inside

Although this information is not available from the container manufacturers, prolonged experience with these types of wastes has indicated that tin/lead solder from the electronics industry is compatible with unlined metal containers. Similarly, pH neutral and caustic solutions with cyanide have been found to be compatible with polyethylene drums, plastic buckets, and jerry cans. Likewise, acid solutions of the type generated at the facility have been found to be compatible with Pyrex glass containers and polyethylene buckets, containers, and drums.

c. What information will be posted on the outside of each container to warn against the contents from being used with any incompatible hazardous wastes?

See Part A of this Section 4 for details. Since the chemical incompatibility problems arise from the presence of only a limited volume of acid materials and wastes, any container used to hold an acid will be clearly marked, "ACID" and stored separately. Also, the pH of all solutions is verified upon arrival and/or prior to mixing to ensure compatibility.

3. Will the facility make sure that hazardous waste containers are always kept closed during movement and storage, except when adding or removing hazardous waste?

YES__**X**___ NO_____. If no, explain why containers will not be kept closed, per 22CCR 66264.173 and 66265.173

Most of the processing containers cannot be closed, but will be stored in secondarily contained areas and kept in secured areas with roofs overhead. Storage containers will all be kept closed, except when in use.

4. Will the facility make sure that hazardous waste containers will not be opened, handled, moved, or stored in a manner that may cause the container to rupture or leak? a manner, which may rupture the container or cause it to leak?

YES___**X**__ NO_____. If no, explain, per 22CCR 66264.173 and 66265.173.

5. Does the facility have incompatible wastes?

YES___**X**__ NO_____. If yes, provide the following information regarding incompatible wastes: per 22CCR 66264.177 and 66265.177.

a. Describe how the facility will make sure that any incompatible hazardous wastes are not unknowingly placed inside of the same hazardous waste container (e.g., cleaning empty containers, labeling/marking, etc.).

The small volume of acid waste that is generated on-site is incompatible with cyanide-containing materials and wastes. Acidic wastes are generated in minor volumes in two different processes: an acid purification rinse is generated in the precious metals precipitate rinsing operation (GRS) ; and an acidic resin regenerate solution is generated in the resin recycling operation (RRS).

The small volume of acid waste that is generated in the AW/FH in GRS is accumulated in a small (5-gallon) labeled Pyrex glass container and is adjusted to an alkaline pH immediately upon generation, and prior to further processing or storage. The empty acid container is then triple rinsed. All Pyrex bottles are permanently marked as "acid" or "cyanide" to help prevent mixing of incompatible solution, even after the neutralization and triple rinsing processes! Finally, before adding any acid or cyanide containing liquid to these glass containers, a small amount of water is added to the container and the pH checked.

The acidic resin regenerate solution waste will be generated infrequently and in limited volumes during the resin regeneration operation. However, the other wastes that are treated in the ion exchange columns and other containers in this containment area are not chemically incompatible with acids, as any cyanide content has already been reduced to insignificant levels. The acid wastes generated in this process are only handled in the ion exchange columns or a dedicated neutralization tank; thereby minimizing the possibility of the mixing of incompatible chemicals.

b. Describe how incompatible hazardous wastes or other materials will be separated by means of a dike, berm, wall, or other device.

The limited volume of acid waste that is generated on-site in the GRS (<5 gallons at a time) is segregated by placing the container within a designated spill containment tray prior to pH neutralization. In addition, the unused acid is stored outside the facility in a dedicated corrosive acid materials storage area that is immediately adjacent to S003 (Resin Recovery System) and has no cyanide containing wastes or materials..

The incompatible hazardous wastes and materials that are part of the Resin Regeneration System (RRS) are segregated from the rest of the facility. These are stored inside of a dedicated secondary system, consisting of berms, and which has been designated as S003.

6. For contaminated containers, per 22CCR 66270.14(b)(19) and 66261.7

   a. Will the facility ensure that hazardous waste containers that are no longer being used or are not suitable for storing hazardous waste are handled as hazardous waste and are properly disposed?

      YES__**X**___ NO_____. If no, explain why the containers will not be handled as hazardous waste and properly disposed.

   b. Will the facility ensure those hazardous waste containers and/or any inner liners, which have been removed from hazardous waste containers, are completely emptied and then appropriately managed or disposed?

      YES__**X**__ NO_____. If no, explain how the empty containers or liners will be managed or disposed.

7. Are any containers kept outside ?

   YES__**X**___ NO_____. If yes, provide the following information:

   a. Describe the measures taken to protect hazardous waste containers that are subject to corrosion or deterioration from the weather (e.g. roofs, tarps, awnings, and elevation of containers above ground surface), per 66270.14(b)(19) and 66270.15(a)(2).

      The facility has three hazardous waste storage areas that are located outside. These have been designated as S003 (the Resin Regeneration Area), S004 (the Cyanide Storage Shed), and S005 (the Waste Water Treatment Area). One of these areas, S004, is a self-contained small storage building. Its construction consists of a roof and four walls to protect the waste containers from the weather. Additionally, the waste containers within this unit are stored on a fiberglass grating which elevates the containers about 6" off the ground.

      A second storage area, S005, is located outside, and is equipped with berms and an overhanging roof to minimize rainwater intrusion. In addiction, hazardous waste containers are stored approximately 5.5" off the ground on pallets. Additionally, S003 is located immediately adjacent to that portion of S005 used for the WTS, and is also equipped with berms and an overhanging roof.

C. SECONDARY CONTAINMENT SYSTEMS FOR CONTAINERS SPECIFICATION SHEETS

Sheet 1. S001 - Solder Dross Storage

Does this container treatment or storage areas have secondary containment?

YES__X___ NO_____. If yes, complete this subsection and the following subsection.

Only solid hazardous wastes (solder dross) with no free liquids are stored in this area; therefore a specific secondary containment structure is not necessary. The concrete floor contains the wastes stored in this location and provides adequate containment for these materials.

1. Describe the containment system giving the following information: 22CCR 66270.14(b)(19), 66270.15(a), and 66264.175.

   a. Materials and method of construction (e.g., poured slab):

      Since the waste in this area is a dry solid material with no free liquids, the poured concrete slab floor provides adequate secondary containment.

   b. Dimensions: Length___20'_____ Width____20'____

   c. If concrete, thickness of base: Approximately 6"

   d. Is the containment area bermed?

      YES_____ NO__X__

      A berm is not required as this waste contains no free liquids.

   e. Does the secondary containment area have a coating or liner?

      YES____NO__X__

      Not applicable since the concrete floor is adequate for containing these materials.

   f. Does the base, coating or liner have any cracks or gaps?

      YES____ NO__X__

2. Provide plan (view from top) and profile (view from the side) drawings of the existing or planned container storage area(s), showing the secondary containment system including any sumps, pumps, piping, etc.

See attached "Section II, Attachment 5, the Facility Map" showing the location or "plan view". There are no profile drawings since there is not berm or dike or other vertical containment structure and such a drawing is not applicable.

a. Is the base sloped?

YES_____ NO__**X**__

b. Are containers elevated to prevent contact with any accumulated liquid?

YES__**X**__ NO_____

The hazardous waste containers in this area are elevated approximately 5.5" above the floor, on pallets.

c. Does the containment system have a sump for collection of accumulated liquids?

YES_____ NO__**X**__

Not applicable, there is no liquid storage.

d. Describe how the container storage area is designed and operated to drain and remove liquids resulting from leaks, spills, or rainfall in as timely a manner as necessary to prevent overflow of the containment system.

This is not applicable; only solid hazardous wastes with no free liquids are stored in this area, which is located inside the building and is not subject to rainwater intrusion.

e. Is the secondary containment system (base, berms, sumps, liners) impervious to wastes and rainfall?

YES__**X**__ NO_____

f. How will the facility ensure compatibility of the secondary containment system with wastes?

Only non-corrosive solid solder dross waste with no free liquids from electronics assembly, and related industries, are stored in this area. This material is chemically compatible with the concrete floor. No other hazardous wastes will be stored in this location without DTSC authorization and compatibility verification.

3. Is the secondary containment area(s) exposed to rainfall?

   YES_____ NO__**X**__

4. Is the containment area exposed to surface run-on due to rainfall, drainage, etc.?

   YES_____ NO__**X**__

5. Describe the test procedures, equipment, and container management practices that will be used to ensure that any accumulated liquids from spills, leaks, ruptures or rainfall are promptly analyzed for hazardous wastes and pumped, drained or removed from the collection area or sump to prevent any overflow of the secondary containment system, per 22CCR 66264.175(b)(5).

   This question is not applicable. Only solid hazardous wastes with no free liquids are stored in this area, which is located inside the facility, and is not subject to rainwater intrusion.

6. Is there a secondary containment system for the hazardous waste loading and unloading areas?

   YES__**X**___ NO____. If yes, is it separate and distinct from any other secondary containment system? If yes, provide the following information:

   a. Provide plan and profile drawings of the secondary containment system for hazardous waste loading and unloading areas and give all of the applicable information that is requested in subsection D.1. through D.5. per 22CCR 66270.14(b)(19) and 66264.175.

      The loading/unloading area consists of a concrete floor that will provide adequate, separate secondary containment from other hazardous materials and wastes. The function of this separate containment is to help prevent or minimize hazardous chemical interactions, should an incompatible hazardous material be inadvertently delivered to the facility.

      The dimensions of the solder dross storage area are as follows: 20' x 20'. The containers are placed directly on the floor in a specially designated area. This area is inspected daily to ensure an absence of spills, leaks or other problems.

      The solder dross storage area is located indoors, protecting it from rainfall.. Surface water and sheet flow is prevented by having the asphalt leading up to the service door sloped to drain away from the storage area to prevent surface water run-in or run-on.

      If leaked or spilled material is discovered, the pH will be immediately tested. If a question as to waste identity still exists, a field test for cyanide will be

conducted. The spilled material will then be collected in an appropriate method (i.e. shovel and broom, if solder dross) and transferred to a clean container, which will be labeled to indicate contents and hazard warnings. If questions as to waste identity persist, a sample of the waste will be collected and sent to a DTSC certified hazardous waste testing lab for analysis or the generator will be contacted and queried.

7. Information concerning spacing and layout of containers, per 2CCR 66270.14(b)(19) and 66265.35.

   a. Indicate the minimum aisle space that will be maintained between rows of containers for safe movement of personnel and equipment.

      There will be a minimum of three (3) feet of aisle space between pallet loads (double rows) of stored containers.

   b. Give the maximum number, volume (cubic feet or gallons), and stacking height of containers for each area in which hazardous waste containers are stored.

      Volume = 1,320 gallons
      Stack height = not to exceed two 55-gallon drums in height with pallets
      Maximum number = twenty-four 55-gallon drums, or correspondingly larger numbers of smaller containers

<u>Engineering Certification</u>

See the engineering certification letter from Robinson & Associates dated July 10, 2001 for certification of this area.

1. Name of registered engineer, registration number, and engineering discipline.

   Name of Registered Engineer: Christina M. Robinson
   Registration Number: C 28207
   Engineering Discipline: Civil Engineering

2. Date of expiration of the engineer's registration: March 31, 2002

   See the engineering certification letter from Robinson & Associates dated July 10, 2001 for certification of this area.

Sheet 2. S002 - Gold Recovery System Room

Does this container treatment or storage areas have secondary containment?

YES__**X**___ NO_____. If yes, complete this subsection and the following subsection.

1. Describe the containment system giving the following information, per 22CCR 66270.14(b)(19), 66270.15(a), and 66264.175:

   a. Materials and method of construction (e.g., poured slab):
   Poured concrete slab floor with concrete berm and concresive epoxy coating

   b. Dimensions: Length___40'___ Width___50'__ Height __8"__

   Dimensions listed above are approximate. See Section II, Attachment 5, "The Facility Map" and Attachment 14, "Architectural and Engineering Drawings and Reports".

   c. If concrete, thickness of base: Approximately 6"

   d. Is the containment area bermed?

   YES___**X**__ NO____. If yes, give dimensions and composition of berm:

   (1) Composition of berm: Steel-reinforced concrete with epoxy coating
   (2) Height_8"_ Width_8"_

   e. Does the secondary containment area have a coating or liner?

   YES__**X**__ NO_____. If yes, describe the type of coating or liner used and includes a copy of the manufacturer's specifications, listing coating or liner compatibilities and/or incompatibilities.

   See the enclosed specifications for Terra-Gem III epoxy coating in Section II, Attachment 14.7 "Tera-Gem III Troweled Chemical Resistant Floor System (CRS)".

   f. Does the base, coating or liner have any cracks or gaps?

   YES___ NO__**X**__

2. Provide plan (view from the top) and profile (view from the side) drawings of the existing or planned container storage area(s) showing the secondary containment system including any sumps, pumps, piping, etc. If applicable, indicate on the drawings the

areas in which incompatible hazardous wastes will be stored. In addition, supply the following, per 22CCR 66264.175(b):

See attached Architectural drawings. Attachment 14, Architectural and Engineering Drawings and Reports".

a. Is the base sloped?

YES____ NO__**X**___. If yes, show slope on the profile drawings.

b. Are containers elevated to prevent contact with any accumulated liquid?

YES__**X**__ NO___**X**__.

The floor is a designated secondary containment storage area designed for hazardous waste container storage. Some of the containers in this area are stored elevated on pallets, others are stored directly on the ground and are processed before removal.

c. Does the containment system have a sump for collection of accumulated liquids?

YES_____ NO__**X**__.

d. Describe how the container storage area is designed and operated to drain and remove liquids resulting from leaks, spills or rainfall in as timely a manner as necessary to prevent overflow of the containment system.

Daily inspections and regular occupancy are used to identify leaks or spills.

e. Is the secondary containment system (base, berms, sumps, liners) impervious to wastes and rainfall?

YES__**X**__ NO_____.

f. How will the facility ensure compatibility of the secondary containment system with wastes?

Only authorized, compatible hazardous wastes are accepted for processing or storage at the facility. (Only materials with a pH of 5 or greater are permitted in this room.)

3. Is the secondary containment area(s) exposed to rainfall?

YES_____ NO__**X**__.

4. Is the containment area exposed to surface run-on due to rainfall, drainage, etc.?

   YES_____ NO__**X**__.

   This containment area is located indoors and is not exposed to rainfall or run-on.

5. Describe the test procedures, equipment, and container management practices that will be used to ensure that any accumulated liquids from spills, leaks, ruptures or rainfall are promptly analyzed for hazardous wastes and pumped, drained or removed from the collection area or sump to prevent any overflow of the secondary containment system, per 22CCR 66264.175(b)(5).

   If leaked or spilled material is discovered, the pH will be immediately tested. If a question as to waste identity still exists, a field test for cyanide will be conducted. The spilled material will then be collected in an appropriate method and transferred to a clean container, which will be labeled to indicate contents and hazard warnings. If questions as to waste identity persist, a sample of the waste will be collected and sent to a DTSC certified hazardous waste testing lab for analysis.

6. Is there a secondary containment system for the hazardous waste loading and unloading areas?

   YES__**X**___ NO____. If yes, is it separate and distinct from any other secondary containment system?

   YES__**X**___ NO_____. If yes, provide the following information:

   a. Provide plan and profile drawings of the secondary containment system for hazardous waste loading and unloading areas: See Section II, Attachment 5, "The Facility Map" and Attachment 14, "Architectural and Engineering Drawings and Reports".

      In addition to the secondary containment of the Gold Recovery System Room, there is also a single dedicated loading/unloading area consisting of an epoxy coated steel tray, designed to hold up to eighteen 55-gallon drums of solution in isolation. This tray provides a physical separation and an additional level (or tertiary) containment from other materials being stored or treated in this room.

      The purpose of this unloading/loading tray is to provide a segregated testing and inspection area for incoming materials to be detected for any incoming incompatible wastes, such as acids or oxidizers, in order to prevent dangerous interactions.

      The tray dimensions are: 14'4" (x) x 5'4" (x) x 7"(h). The tray is elevated off the bottom by 7" with a fiberglass grate. This tray is located indoors away from rain and exposure to weather, is secondarily contained, and is inspected daily.

A cyanide test kit and pH paper is available to test any spilled materials. Samples can be collected and sent for analytical testing and generators can be contacted for identifying wastes should there be any question as to identity or contents. J&B personnel are trained in specific waste identification procedures.

7. Information concerning spacing and layout of containers, per 2CCR 66270.14(b)(19) and 66265.35.

   a. Indicate the minimum aisle space that will be maintained between rows of containers for safe movement of personnel and equipment.

      There will be a minimum of 3 feet aisle space between pallet loads (double rows) of stored containers.

   b. Give the maximum number, volume (cubic feet or gallons), and stacking height of containers for each area in which hazardous waste containers are stored.

Storage Volume =	5,500 gallons
Stack height =	Two 55-gallon drums
Max. number =	100 - 55-gallon drums, or correspondingly larger numbers of smaller containers.

<u>Engineering Certification</u>

See the engineering certification letter from Robinson & Associates dated July 10, 2001 for certification of this area.

1. Name of registered engineer, registration number, and engineering discipline:

   Name of Registered Engineer: Christina M. Robinson
   Registration Number: C 28207
   Engineering Discipline: Civil Engineering

2. Date of expiration of the engineer's registration: March 31, 2002

Sheet 3. S003 - Resin Regeneration System (Ion Exchange)

Does this container treatment or storage areas have secondary containment?

YES__X___ NO_____. If yes, complete this subsection and the following subsection.

If the facility has more than one secondary containment system for containers, photocopies of this section can be used for each distinct system, and specification sheets may be used if more room is needed.

1. Describe the containment system giving the following information, per 22CCR 66270.14(b)(19), 66270.15(a), and 66264.175.

   a. Materials and method of construction (e.g., poured slab): Monolithic concrete pour, concrete slab with berms.

   b. Dimensions: Length __13'__ Width __3.25'__ Height __1.25'__

   c. If concrete, thickness of base: 15" approximately

   d. Is the containment area bermed?

      YES__X___ NO_____. If yes, give dimensions and composition of berm:

      (1) Composition of berm: Steel-reinforced concrete with epoxy coating
      (2) Height____1.25'__ Width___0.66"_

   e. Does the secondary containment area have a coating or liner?

      YES_X_ NO__. If yes, describe the type of coating or liner used and includes a copy of manufacturer's specifications, which list coating or liner compatibilities and/or incompatibilities.

      See the enclosed specifications for Terra-Gem III epoxy coating.

   f. Does the base, coating, or liner have any cracks or gaps?

      YES___ NO__X__. If yes, describe the cracks or gaps (size, depth, etc.) and explain how they will be repaired.

2. Plan (view from top) and profile (view from the side) drawings of the existing or planned container storage area(s), showing the secondary containment system.

   See the drawings In Section I, Attachment 14, "Architectural and Engineering Drawings and Reports".

a. Is the base sloped?

YES____ NO__**X**__

b. Are containers elevated to prevent contact with any accumulated liquid?

YES__**X**__ NO__**X**___

The ion exchange columns are elevated off the ground on rubber bases; the pH neutralization container will not be elevated.

c. Does the containment system have a sump for collection of accumulated liquids?

YES___ NO __**X** ___

d. Describe how the container storage area is designed and operated to drain and remove liquids resulting from leaks, spills, or rainfall in as timely a manner as necessary to prevent overflow of the containment system.

Spilled or leaked material would be manually collected with a pump or other appropriate method. The containment system can hold more than 10% of the aggregate volume of hazardous waste stored in this area, and more than 150% of the largest container. The secondary containment system is inspected daily when in operation for signs of leaks and spills, as well as for damaged containers.

e. Is the secondary containment system (base, berms, sumps, liners) impervious to wastes and rainfall?

YES__**X**__ NO_____. If no, explain the measures that the facility will take to make it impervious.

f. How will the facility ensure compatibility of the secondary containment system with wastes?

Only authorized, compatible hazardous wastes are accepted for processing or storage at the facility.

3. Is the secondary containment area(s) exposed to rainfall?

YES_____ NO___**X**_.

4. Is the containment area exposed to surface run-on due to rainfall, drainage, etc.?

   YES_____ NO__**X**__

5. Describe the test procedures, equipment, and container management practices that will be used to ensure that any accumulated liquids from spills, leaks, ruptures, or rainfall are promptly analyzed for hazardous wastes and are pumped, drained or removed from the collection area or sump to prevent any overflow of the secondary containment system, per 22CCR 66264.175(b)(5).

   If leaked or spilled material is discovered, the pH will be immediately tested. If a question as to waste identity still exists, a field test for cyanide will be conducted. The spilled material would then be collected by an appropriate method and transferred to a clean container, which has been labeled to indicate contents and hazard warnings. If questions as to waste identity persist, a sample of the waste will be collected and sent to a DTSC-certified hazardous waste testing lab for analysis.

6. Is there a secondary containment system for the hazardous waste loading and unloading areas?

   YES___**X**__ NO____. If yes, is it separate and distinct from any other secondary containment system?

   YES___**X**__ NO_____. If yes, provide the following information:

   a. The facility has a dedicated loading/unloading area for all solutions coming into the facility. This area has been described in detail above. See Section II, Attachment 5, "The Facility Map" and Attachment 14, "Architectural and Engineering Drawings and Reports".

7. Information concerning spacing and layout of containers, per 2CCR 66270.14(b)(19) and 66265.35:

   a. Indicate the minimum aisle space that will be maintained between rows of containers for safe movement of personnel and equipment.

      Not applicable. This containment area is used for treatment, not for general storage. However, this area will be used for any acid materials that may accidentally be brought on site that need interim storage.

   b. Give the maximum number, volume (cubic feet or gallons), and stacking height of containers for each area in which hazardous waste containers are stored.

      Volume = 463 gallons
      Stack height = one (not to exceed two drums height)

Max. number = The area is approved for the following hazardous waste containers: Ion exchange columns (4), a pH neutralization container and temporary storage of containers containing incidental or accidentally received acid materials or wastes which would require acid storage. The total authorized container number is therefore anticipated to be five, but the area could hold an additional ten 55-gallon double-stacked drums of acid in an emergency or if needed.

In addition to S003, there are two adjacent corrosive storage areas for non-hazardous wastes or hazardous materials that can be used for corrosive hazardous waste storage in an emergency or if needed. Each of these areas could hold eight 55-gallon double-stacked drums. See the attached Waste Treatment System detail drawing in Section II, Attachment 14, "Architectural and Engineering Drawings and Reports".

Engineering Certification

See the engineering certification letter from Robinson & Associates dated July 10, 2001 for certification of this area.

1. Name of registered engineer, registration number, and engineering discipline:

   Name of Registered Engineer: Christina M. Robinson
   Registration Number: C 28207
   Engineering Discipline: Civil Engineering

2. Date of expiration of the engineer's registration: March 31, 2002

Sheet 4. S004 - Outside Portable Hazardous Waste Storage Shed

Does this container treatment or storage areas have secondary containment?

YES__X___ NO_____. If yes, complete this subsection and the following subsection.

1. Describe the containment system giving the following information, per 22CCR 66270.14(b)(19), 66270.15(a) and 66264.175.

   a. Materials and method of construction (e.g., poured slab):

      Prefabricated storage shed of heavy steel construction , with secondary containment sump, fiberglass grating, an explosion venting roof, Class I/Division I electrical, and Class II/Division I mechanical ventilation fan. The shed is of open channel construction; and the shed and sump walls are welded.

   b. Shed dimensions: Length__9.75'___ Width__5.5 '__. Height __7.5'_
      Secondary containment sump dimensions:
      Length__9.75'__ Width_5.5 '_ Height __0.5'_

   c. If concrete, thickness of base: Not applicable. This is a self-contained unit.

   d. Is the containment area bermed?

      YES__X___ NO____. (Steel walled tray). If yes, give dimensions and composition of berm.

      (1) Composition of berm: Steel walls and base with epoxy coating
      (2) Height____0.5'__ Width___3/32"_ min. wall thickness

   e. Does the secondary containment area have a coating or liner?

      YES__X__ NO_____. If yes, describe the type of coating or liner used and includes a copy of manufacturer's specifications, which list coating or liner compatibilities and/or incompatibilities.

      An epoxy-phenol coating, Plasite 7122L, is used in this storage area with no compatibility problems or deterioration noted. See the enclosed specification sheet for Plasite 7122L and the TD-2 Resistance Test Data table.

   f. Does the base, coating, or liner have any cracks or gaps?

      YES___ NO__X__

2. Plan (view from top) and profile (view from the side) drawings of the existing or planned container storage area(s), showing the secondary containment system.

   See the drawings In Section I, Attachment 14, "Architectural and Engineering Drawings and Reports".

   a. Is the base sloped?

      YES____ NO__**X**___. If yes, show slope on the profile drawings.

   b. Are containers elevated to prevent contact with any accumulated liquid?

      YES__**X**__ NO_____

      The containers in this storage area are elevated approximately 6" above the secondary floor on a grating of fiberglass coated metal construction.

   c. Does the containment system have a sump for collection of accumulated liquids?

      YES__**X**___ NO_____

   d. Describe how the container storage area is designed and operated to drain and remove liquids resulting from leaks, spills, or rainfall, in as timely a manner as necessary to prevent overflow of the containment system.

      The secondary containment system slopes to a drain plug, which in the event of a spill or leak would be manually opened. The containment system can hold more than 10% of the aggregate volume of hazardous waste stored in this area, and more than 150% of the largest container. The secondary containment system is inspected daily, when in operation, for signs of leaks and spills, and for damaged containers.

   e. Is the secondary containment system (base, berms, sumps, liners) impervious to wastes and rainfall?

      YES__**X**__ NO_____. If no, explain the measures that the facility will take to make it impervious.

   f. How will the facility ensure compatibility of the secondary containment system with wastes?

      All of the hazardous wastes in this area are compatible with the epoxy coating. New wastes will not be handled without prior verification of chemical compatibility by the epoxy manufacturer or by trial test.

3. Is the secondary containment area(s) exposed to rainfall?

   YES_____ NO___**X**_

4. Is the containment area exposed to surface run-on due to rainfall, drainage, etc.?

   YES____ NO__**X**__

5. Describe the test procedures, equipment, and container management practices that will be used to ensure that any accumulated liquids from spills, leaks, ruptures or rainfall are promptly analyzed for hazardous wastes and are pumped, drained or removed from the collection area or sump to prevent any overflow of the secondary containment system, per 22CCR 66264.175(b)(5).

   If leaked or spilled material is discovered, the pH will be immediately tested. If a question as to waste identity still exists, a field test for cyanide will be conducted. The spilled material would then be collected using an appropriate method and transferred to a clean container, which has been labeled to indicate contents and hazard warnings. If questions as to waste identity persist, a sample of the waste will be collected and sent to a DTSC certified hazardous waste testing lab for analysis.

6. Is there a secondary containment system for the hazardous waste loading and unloading areas?

   Yes. It is a separate and isolated drum trays for separating incoming materials until they have been inspected.

7. Information concerning spacing and layout of containers, per 2CCR 66270.14(b)(19) and 66265.35:

   a. Indicate the minimum aisle space that will be maintained between rows of containers for safe movement of personnel and equipment.

      This storage area is small and stores up to nine 55-gallon drums (or the equivalent amount in smaller containers, such as 1-, 5-, 15-, or 30-gallon sizes) in an "L" shape, thereby allowing safe movement. Smaller containers can be stored either stacked or on the shelves built onto the wall.

   b. Give the maximum number, volume (cubic feet or gallons), and stacking height of containers for each area in which hazardous waste containers are stored.

      Volume = 495 gallons
      Stack height = One 55-gallon drum
      Max. number = Nine 55-gallon drums, or correspondingly larger number of smaller containers.

Engineering Certification

See the engineering certification letter from Robinson & Associates dated July 10, 2001 for certification of this area.

1. Name of registered engineer, registration number, and engineering discipline:

   Name of Registered Engineer: Christina M. Robinson
   Registration Number: C 28207
   Engineering Discipline: Civil Engineering

2. Date of expiration of the engineer's registration: March 31, 2002

Sheet 5. S005 - Wastewater Treatment System Area

Does this container treatment or storage areas have secondary containment?

YES__**X**___ NO_____. If yes, complete this subsection and the following subsection.

1. Describe the containment system giving the following information, per 22CCR 66270.14(b)(19), 66270.15(a) and 66264.175.

   a. Materials and method of construction (e.g., poured slab): Monolithic pour, steel reinforced concrete slab with berms

   b. Dimensions: Length __20.5'__ Width __19'__ Height __1.25'__

   c. If concrete, thickness of base: 15"

   d. Is the containment area bermed?

      YES__**X**___ NO_____. If yes, give dimensions and composition of berm.

      (1) Composition of berm: Monolithic pour steel-reinforced concrete with epoxy coating

      (2) Height____1.25'__ Width___0.66"____

   e. Does secondary containment area have a coating or liner?

      YES__**X**__ NO__. If yes, describe the type of coating or liner used and includes a copy of manufacturer's specifications, which list coating or liner compatibilities and/or incompatibilities.

      See the enclosed specifications for Terra-Gem III epoxy coating.

   f. Does the base, coating, or liner have any cracks or gaps?

      YES____ NO__**X**__.

2. Plan (view from top) and profile (view from the side) drawings of the existing or planned container storage area(s), showing the secondary containment system.

   See the drawings In Section I, Attachment 14, "Architectural and Engineering Drawings and Reports".

a. Is the base sloped?

YES__X__ NO____. If yes, show slope on the profile drawings.

Containment area drains to a clean out. Slope is <1% . See Architectural Drawing and Waste Water Treatment Detail drawing.

b. Are containers elevated to prevent contact with any accumulated liquid?

YES__**X**__ NO_____

The filter press is supported on legs, elevating it off the ground. The fiber bags will also be elevated.

c. Does the containment system have a sump for collection of accumulated liquids?

YES___**X**__ NO____

The system has a 60-gallon capacity cleanup sump.

d. Describe how the container storage area is designed and operated to drain and remove liquids resulting from leaks, spills, or rainfall, in as timely a manner as necessary to prevent overflow of the containment system.

Spilled or leaked material will drain to a 60-gallon spill collection sump. The entire secondary containment system (at 3,642 gal. capacity) can hold more than 10% of the aggregate volume of hazardous waste stored in this area, and more than 150% of the largest container. The secondary containment system is inspected daily when in operation for signs of leaks and spills, as well as for damaged containers.

e. Is the secondary containment system (base, berms, sumps, liners) impervious to wastes and rainfall?

YES__**X**__ NO_____

f. How will the facility ensure compatibility of the secondary containment system with wastes?

Only authorized, compatible, hazardous wastes are accepted for processing or storage at the facility. All wastes are field tested and inspected on receipt at the facility; incompatible wastes are screen for by pH testing.

3. Is the secondary containment area(s) exposed to rainfall?

YES_____ NO___**X**_

4. Is the containment area exposed to surface run-on due to rainfall, drainage, etc.?

   YES_____ NO__**X**__

5. Describe the test procedures, equipment, and container management practices that will be used to ensure that any accumulated liquids from spills, leaks, ruptures, or rainfall are promptly analyzed for hazardous wastes and pumped, drained or removed from the collection area or sump to prevent any overflow of the secondary containment system, per 22CCR 66264.175(b)(5).

   If leaked or spilled material is discovered, the pH will be immediately tested. If a question as to waste identity still exists a field test for cyanide will be conducted. The spilled material would then be collected by an appropriate method and transferred to a clean container, which has been labeled to indicate contents and hazard warnings. If questions as to waste identity persist, a sample of the waste will be collected and sent to a DTSC-certified hazardous waste testing lab for analysis.

6. Is there a secondary containment system for the hazardous waste loading and unloading areas?

   YES___**X**__ NO____. If yes, is it separate and distinct from any other secondary containment system?

   YES___**X**__ NO_____

   See Section II, Attachment 5, "The Facility Map" and Attachment 14, "Architectural and Engineering Drawings and Reports" showing the details of the secondary containment and storage areas. The facility has a single dedicated loading/unloading area for solutions, in S002.

7. Information concerning spacing and layout of containers, per 2CCR 66270.14(b)(19) and 66265.35:

   a. Indicate the minimum aisle space that will be maintained between rows of containers for safe movement of personnel and equipment.

      There will be a minimum of three feet between adjacent rows of treatment containers (if any).

   b. Give the maximum number, volume (cubic feet or gallons), and stacking height of containers for each area in which hazardous waste containers are stored.

      Volume = 450 gallons
      Stack height = One (not to exceed two high)
      Max. number = Six containers

The area is approved for the following hazardous waste containers only: filter press, filter bags, and/or filter cake drums. The total authorized container number is six.

Engineering Certification

See the engineering certification letter from Robinson & Associates dated July 10, 2001 for certification of this area.

1. Name of registered engineer, registration number, and engineering discipline:

   Name of Registered Engineer: Christina M. Robinson
   Registration Number: C 28207
   Engineering Discipline: Civil Engineering

2. Date of expiration of the engineer's registration: March 31, 2002

D. TREATMENT IN CONTAINERS - SPECIFICATION SHEETS

Sheet 1. Filtration/Rinsing of Precipitate

Is treatment being done in containers?

YES__X__ NO_____. If yes, complete this subsection.

1. Describe each treatment process and include plan and profile drawings for each existing or planned treatment process unit and associated treatment equipment showing any valves, plumbing, pumps, process flow direction, etc. per 22CCR 66270.14(b)(19).

   The precious metal precipitate formed in the precipitation tanks is transferred to an aspirated filter system in order to help remove water content and impurities. The filtration system is set up adjacent to the fume hood and is secondarily contained by a plastic tray. The lean liquor that separates from the precipitate drains to a 5-gallon Pyrex container.

   The precious metal containing "mud" in the filter apparatus is then washed with water to remove contaminants. The resultant liquid effluent is drained to the same 5-gallon Pyrex container, and from there is transferred to the Wastewater Treatment System, or to a DOT storage container and located to one of the designated chemically compatible hazardous waste storage areas.

   Following this water wash, the precious metal containing "mud" in the filter apparatus is washed with a minimal volume (less than five gallons) of a dilute acid solution (<40% acid) in order to remove additional contaminants. The precipitate is then washed with water to remove all acid residues. The resultant liquid effluents from these washing processes drain to a different 5-gallon Pyrex container, prior to being transferred to either a 15- or 30-gallon container for pH neutralization purposes, as described below. The acid purification portion of the operation is conducted inside the fume hood with all primary containers being secondarily contained in trays.

   The precious metal precipitate is then transferred to a crucible for processing in the furnace. See the block flow diagram for additional details.

   a. Dimensions and volumes of treatment process units:

      Aspirated Ceramic Filter = 2.5-gallon capacity, 13" (d) x 5" (h)
      Pyrex container = 5-gallon capacity, 0.875' (d) x 1.29' (h)

b. Specifications for any existing or planned treatment process unit (manufacturer's specifications if available):

The acid used for precious metal purification purposes is typically a diluted nitric acid solution, which is used in volumes of less than 5-gallons per batch. Limited volumes of hydrochloric acid may also be used.

c. Construction materials for each treatment process unit:

Filter = Ceramic
Container = Pyrex glass

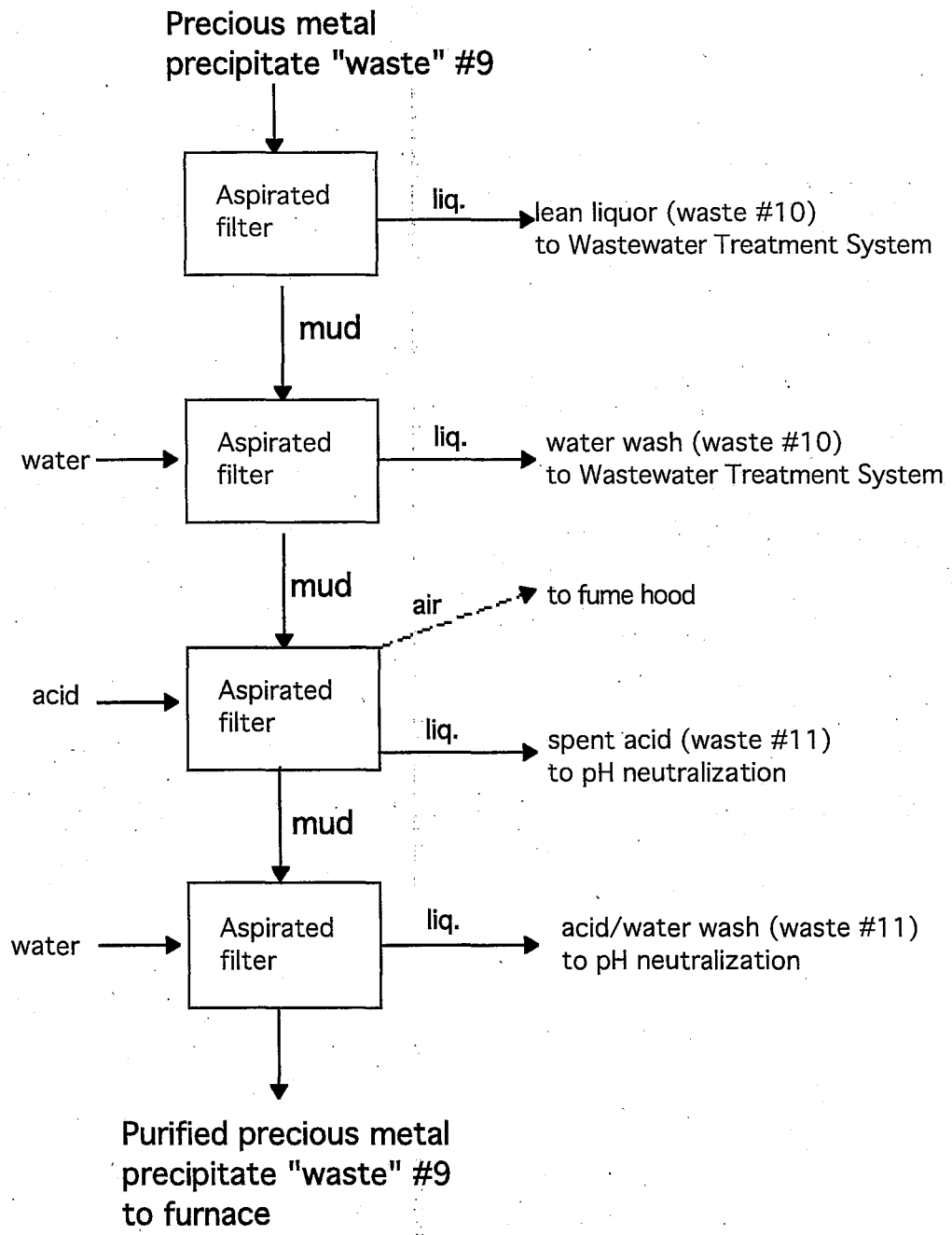
d. Method of construction for any treatment process unit (e.g., welded, cast, molded, etc.):

Filter = Not applicable, this is a laboratory paper filter
Container = Molded

e. Information concerning operation of treatment process units (e.g., manual, automatic, instrumentation, etc.):

Filtration is accomplished using an aspirated filter, in conjunction with manual rinsing using water and a diluted acid solution.

Block Flow Diagram
Rinsing/Filtration Operation



2. Describe in detail all of the chemical treatment processes that are performed in containers (e.g., oxidation/reduction, pH modification, precipitation, etc.). If more than one type of chemical treatment process is used at the facility, photocopies of this page can be used for listing each type. The description should include but not be limited to the following, per 22CCR 66270.14(b)(19).

   Precious metal purification by rinsing. See the block flow diagram for additional details.

   a. Equipment used:

      Aspirated ceramic filter with 2.5-gallon capacity
      Pyrex container with 5-gallon capacity

   b. Chemicals added:

      Water
      Nitric acid solution, 38.5%

   c. Process type (e.g., batch, continuous, etc.): Batch treatment

   d. Feed rate (e.g., gal/min., lb/hr., etc.):

      Typical batch size = 1.5-gallon precious metal precipitate
      Typical batch time = 4 - 8 hours/batch.

   e. Chemical reactions: Gold purification, examples only

      $Zn(s) + 2HNO_3 \text{--->} 2H^+ + Zn(NO_3)_2 \text{--->} Zn^{++} + 2NO_3^- + H_2(g)$

      $Pb(s) + 2HNO_3 \text{--->} 2H^+ + Pb(NO_3)_2 \text{--->} Pb^{++} + 2NO_3^- + H_2(g)$

   f. Products and by-products for each chemical treatment process:

      Product = purified gold and/or other precious metals

      Byproducts =
      1. Gold precipitation supernatant (lean liquor) - Waste #10
      2. Water wash solution with heavy metals - Waste #10
      3. Acid wash solution with heavy metals - Waste #11

3. Describe in detail all of the physical treatment processes that are done in containers (e.g., separation, distillation, evaporation, etc.). If more than one type of physical treatment process is used at the facility, photocopies of this page can be used for listing each type. The description should include but not be limited the following, per 22CCR 66270.14(b)(19).

Liquid separation is performed via filtration with aspiration.

a. Equipment used:

Aspirated ceramic filter with 2.5-gallon capacity
Pyrex container with 5-gallon capacity

b. Chemicals added: Water and nitric acid are used in the washing process

c. Process type (e.g., batch, continuous, etc.): Batch treatment

d. Feed rate (e.g., gal/min, lb/hr, etc.):

Batch size = 4.5-gallons metal precipitate-solution mixture
Typical batch time = 4 - 8 hours/batch

e. Products and by-products for each of the physical treatment processes:

Product = purified gold and/or other precious metals

Byproducts =
1. Gold precipitation supernatant (lean liquor) - Waste #10
2. Water wash solution with heavy metals - Waste #10
3. Acid wash solution with heavy metals - Waste #11

4. For any treatment unit, furnish sampling data that shows the effectiveness of the treatment. This data should be based on sampling of untreated incoming hazardous waste and waste after treatment. The samples must be tested at a California state certified analytical laboratory.

The treatment efficiency for the gold reclamation process is essentially 100%. Due to the nature of the treatment processes used at the facility (for precious metal reclamation), the primary chemical constituent that makes the waste handled at the facility hazardous is cyanide.

The cyanide content of the waste influent to the treatment system varies from 0 (non-cyanide solutions) to about 100,000 ppm (some silver plating solutions), with an average cyanide range of 1,000 to 10,000 in the lean liquor, as indicated in laboratory reports.

The cyanide content in the finished gold product is essentially zero in that any cyanide present in the precious metal precipitate must, by definition, have either been removed in the washing process, destroyed by oxidation in the acid purification process, or destroyed by thermal decomposition in the furnace which operates at a temperature of about 2,500 °F.

5. Provide the following information concerning prevention of releases to the environment, per 22CCR 66270.14(b)(8).

   a. Describe how the facility will prevent any releases of hazardous waste from reaching either the subsurface soil or the groundwater.

      The container treatment area is secondarily contained by the fume hood and the worktable which has a plastic containment lip. In addition, all liquid effluents generated by this process (lean liquor, water rinse, and acid purification solutions) are secondarily contained inside of plastic tubs to prevent run-off. Finally, the entire fume hood and adjacent workbench have a fourth level of spill containment, consisting of a plastic spill tray.

   b. Describe how the facility will prevent any releases of hazardous waste from reaching either surface soils, surface water or wetlands. See section a above.

   c. Describe how the facility will prevent any releases of hazardous waste from reaching into the air.

      The acid washing operation generates some air emissions, however these are limited by first washing the precious metal precipitate with water. Air emissions are further limited by the use of only limited volumes of diluted acid solution (<5-gallons/batch). This operation is conducted under permit from the local air district (Bay Area Air Quality Management District).

6. Are there any containers used as treatment units located outside of secondary containment areas?

   YES_____ NO__**X**__

Sheet 2. pH Neutralization of Purification Rinses

Is treatment being done in containers?

YES__X__ NO_____. If yes, complete this subsection.

1. Describe each treatment process and include plan and profile drawings for each existing or planned treatment process unit and associated treatment equipment showing any valves, plumbing, pumps, process flow direction, etc., per 22CCR 66270.14(b)(19).

   The spent acid purification solution that was generated in the filtration/rinsing operation discussed above is treated by pH neutralization immediately after generation. The pH neutralization operation is performed using solid sodium hydroxide, and is monitored throughout the process by the use of a portable pH meter and probe, or pH paper.

   The acid solution generated in the rinsing operation described above is transferred to either a 15- or 30-gallon open-top polyethylene container. After determining the initial pH of the solution using a portable pH meter or paper, approximately 0.25 to 0.5 pounds of solid sodium hydroxide per gallon of solution to be neutralized is added to the container.

   The waste solution is mixed by using a stirring stick. The solution is then visually checked for evidence of a color change. If a color change is observed, the pH of the solution is retested. If a color change is not observed, additional caustic soda is added and the solution is re-mixed.

   The pH neutralization operation proceeds in a stepwise manner as described above until visual monitoring and pH testing have indicated that a pH of between 7 and 11 has been produced. The solution is then manually transferred to the Wastewater Treatment System, or to a DOT storage container to be located in one of the designated chemically compatible hazardous waste storage areas.

   a. Dimensions and volumes of treatment process units:

      Polyethylene open-top container = 15-gallon capacity, 1.2' (d) x 1.75' (h)
      Polyethylene open-top container = 30-gallon capacity, 1.4' (d) x 2.4' (h)

   b. Specifications for any existing or planned treatment process unit (manufacturer's specifications if available):

      Manual pH adjustment operation of small volume acid wastes using caustic soda

   c. Construction materials for each treatment process unit:

      Container = Polyethylene

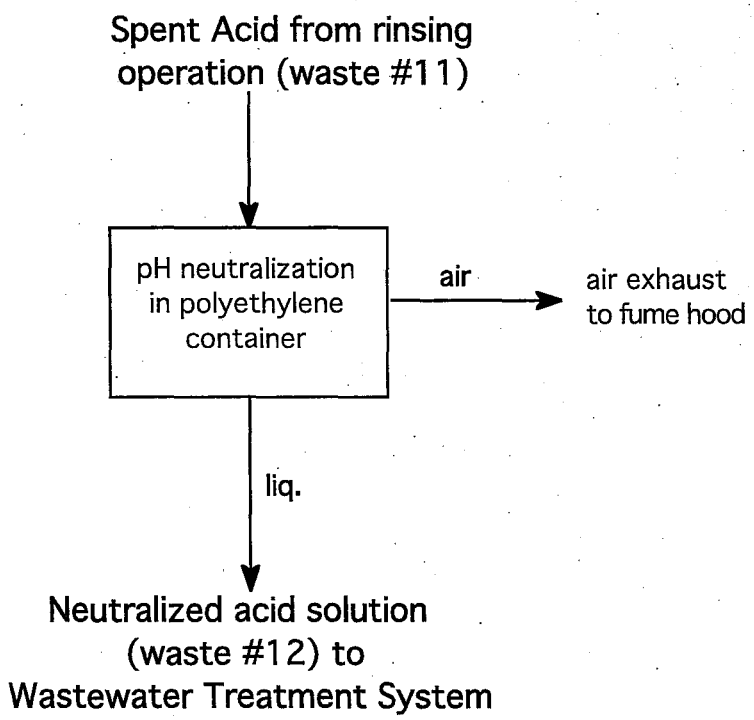
d. Method of construction for any treatment process unit (e.g., welded, cast, molded, etc.):

Plastic injection mold

e. Information concerning operation of treatment process units (e.g., manual, automatic, instrumentation, etc.):

(1) Manual pH adjustment operation of small volume acid wastes using caustic soda.
(2) Manual pH monitoring of reaction using a portable pH meter or pH paper.

Block Flow Diagram
pH Neutralization Operation



2. Chemical treatment processes: Describe in detail all of the chemical treatment processes that are done in containers (e.g., oxidation/reduction, pH modification, precipitation, etc.). If more than one type of chemical treatment process is used at the facility, photocopies of this page can be used for listing each type. The description should include but not be limited to the following, per 22CCR 66270.14(b)(19):

Neutralization of limited volumes of a nitric and/or hydrochloric acid solution using caustic soda:

a. Equipment used:

pH meter with probes and buffer solutions, and/or pH paper
Polyethylene container with 15-gallon capacity

b. Chemicals added: Caustic soda, solid (sodium hydroxide)

c. Process type (e.g., batch, continuous, etc.): Batch treatment

d. Feed rate (e.g., gal/min., lb/hr., etc.):

Manual feed batch operation that is typically operated at a rate of 0.5 lbs/minute

Typical batch size = 10 gallons acid/water solution = acid used in precipitate Washing, along with subsequent water rinse
Typical batch time = 30 minutes/batch

e. Chemical reactions: Nitric acid example shown only

$NaOH + HNO_3 \text{--->} Na^+ + NO_3^- + H_2O$

f. Products and by-products for each chemical treatment process:

Neutralized acid solution (Waste #12)

3. Describe in detail all of the physical treatment processes that are done in containers (e.g., separation, distillation, evaporation, etc.). If more than one type of physical treatment process is used at the facility, photocopies of this page can be used for listing each type. The description should include but not be limited the following, per 22CCR 66270.14(b)(19).

a. Equipment used: Ceramic filter with filter paper and glass Pyrex container

b. Chemicals added: Hydrochloric Acid and/or Sodium Hydroxide

c. Process type (e.g., batch, continuous, etc.): Batch

d. Feed rate (e.g., gal/min, lb/hr, etc.). Up to 10 gallons/batch

e. Products and by-products for each of the physical treatment processes: Gold mud and a heavy metal solution.

4. For any treatment unit, furnish sampling data that shows the effectiveness of the treatment. This data should be based on sampling of untreated incoming hazardous waste and waste after treatment. The samples must be tested at a California state certified analytical laboratory.

   Influent acid solution pH = <1
   Neutralized effluent average pH = 9 to 12
   Treatment efficiency = 100%

5. Provide the following information concerning prevention of releases to the environment, per 22CCR 66270.14(b)(8).

   a. Describe how the facility will prevent any releases of hazardous waste from reaching either the subsurface soil or the groundwater.

      Acid waste is generated in very small volumes of less than 5-gallons per batch, and has at least two separate levels of secondary containment from the time of generation to the time of final pH neutralization. The neutralized solution is then transferred either to the Wastewater Treatment System or to one of the compatible hazardous waste storage areas.

   b. Describe how the facility will prevent any releases of hazardous waste from reaching either surface soils, surface water or wetlands. See section 5.a. above.

   c. Describe how the facility will prevent any releases of hazardous waste from reaching into the air.

      The pH neutralization operation is performed inside of the fume hood in very small volumes of 5 gallons or less. During this operation, caustic soda is added to the acid solution slowly and sequentially with mixing to minimize airborne releases. The neutralization operation is continued until pH monitoring indicates that an alkaline pH has been established. This treatment operation is performed under permit from the local air district (Bay Area Air Quality Management District).

6. Are there any containers used as treatment units located outside of secondary containment areas?

   YES_____ NO__X__

Sheet 3. Filtration of Wastewater Sludge

Is treatment being done in containers?

YES__ **X** _ NO_____. If yes, complete this subsection.

Note: This is not a container, this is a filter press used to remove sludge from wastewater. It is not described elsewhere in the Operation Plan so it is being described here.

1. Describe each treatment process and include plan and profile drawings for each existing or planned treatment process unit and associated treatment equipment showing any valves, plumbing, pumps, process flow direction, etc., per 22CCR 66270.14(b)(19).

   The heavy metal-sulfide wastewater treatment sludge that is generated in the two wastewater treatment tanks is processed to remove water content via filtration in a filter press. See the container specification sheet and drawing of the filter press for additional details.

   a. Dimensions and volumes of treatment process units

      The filter press is irregularly shaped. See the container specification sheet and drawing of the filter press for additional details. The maximum container capacity is 3 cubic feet, or 22.5 gallons.

   b. Specifications for any existing or planned treatment process unit (manufacturer's specifications if available):

      JWI Filter Press, Mod. No. 630G32-21/36-6/10 DYLS, PSI 100

   c. The materials of construction for each treatment process unit: Various, see the container specification sheet and drawing of the filter press for details.

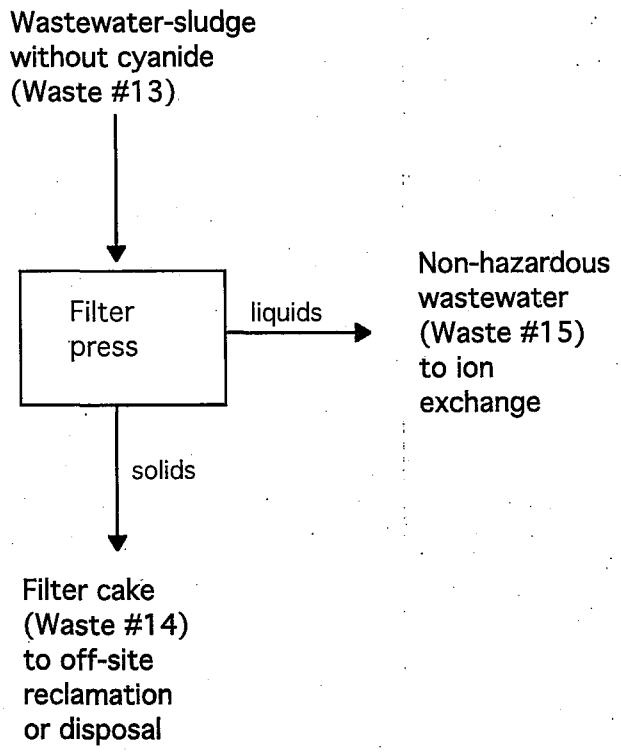
   d. Construction method for any treatment process unit (e.g., welded, cast, molded, etc.):

      Various, see the container specification sheet and drawing of the filter press for details.

   e. Information concerning operation of treatment process units (e.g., manual, automatic, instrumentation, etc.):

      The treatment container is filled and activated manually. Once the treatment operation has been started, the unit automatically moves through its pressing cycle, using increasingly higher levels of air pressure to remove as much of the water content as possible.

Block Flow Diagram
Wastewater Sludge Filter Pressing Operation



2. Chemical treatment processes: Not applicable, this particular treatment operation is physical not chemical in nature.

3. Physical treatment processes: Filtration of wastewater sludge by use of a filter press

   a. Equipment used: The maximum capacity of the filter press is 3 cubic feet, or 22.5 gallons

   b. Chemicals added: None

   c. Process type (e.g., batch, continuous, etc.): Batch treatment

   d. Feed rate (e.g., gal/min, lb/hr, etc.): 15 GPM (determined by pump speed)

   e. Products and by-products for each of the physical treatment processes:

      Filter cake (Waste #14)
      Non-hazardous wastewater effluent (Waste #15)

4. For any treatment unit, furnish sampling data that shows the effectiveness of the treatment. This data should be based on sampling of untreated incoming hazardous waste and waste after treatment. The samples must be tested at a California state certified analytical laboratory.

   Note: The WTS and Filter press have only been used a couple of times in the last ten years. No data is available at this time.

   Estimated water content in sludge prior to filtration = 90%
   Estimated water content in filter cake after to filtration = 35%
   Treatment efficiency = 100 * (90 - 35) / 90 = 61% estimated

5. Provide the following information concerning prevention of releases to the environment, per 22CCR 66270.14(b)(8).

   a. Describe how the facility will prevent any releases of hazardous waste from reaching either the subsurface soil or the groundwater.

      The entire wastewater treatment area is secondarily contained by a spill containment vault, as detailed elsewhere in this permit application, in such a manner as to prevent any hazardous wastes from releasing into the environment.

   b. Describe how the facility will prevent any releases of hazardous waste from reaching either surface soils, surface water or wetlands. See section 5.a. above.

   c. Describe how the facility will prevent any releases of hazardous waste from reaching the air.

      The filter pressing operation does not involve the treatment or generation of any volatile substances, nor is the filter cake product a friable powder. As such, this treatment process presents no potential hazard of air release. Furthermore, this treatment operation is performed under permit from the local air district (Bay Area Air Quality Management District).

6. Are there any containers used as treatment units located outside of secondary containment areas?

   YES_____ NO__**X**__

Sheet 4. Ion Exchange and Resin Regeneration

Is treatment being done in containers?

YES__X__ NO_____. If yes, complete this subsection.

1. Describe each treatment process and include plan and profile drawings for each existing or planned treatment process unit and associated treatment equipment showing any valves, plumbing, pumps, process flow direction, etc., per 22CCR 66270.14(b)(19).

   The nonhazardous wastewater effluent that is generated in the filter press is further processed through an ion exchange system to remove heavy metals prior to discharge. While the wastewater that is influent to the ion exchange system is nonhazardous, the resin and the solution within the resin column become hazardous as they remove and concentrate trace amounts of metals prior to sewering. Furthermore, once the efficiency of the ion exchange system slows down, the resin must be regenerated on-site. See the attached plan and profile drawings of the ion exchange and resin regeneration systems for details on the construction of the unit.

   a. Dimensions and volumes of treatment process units:

      Ion Exchange Columns = 32 gallon capacity/column: 14" (d) x 48" (h)

      Acid Neutralization Container = 104 gallon capacity: 27" (d) x 42" (h)

   b. Specifications for any existing or planned treatment process unit (manufacturer's specifications if available).

      Ion Exchange Columns (4) = Ionics, model 3.6 MB DI Portable Exchange Mixed Bed Deionization Columns

      Acid Neutralization Container = Ryan Herco, model 7110-020

   c. Construction materials for each treatment process unit:

      Ion Exchange Columns = fiberglass reinforced plastic with rubber base

      Acid Neutralization Container = 1/4" linear polyethylene, with 1/2" base

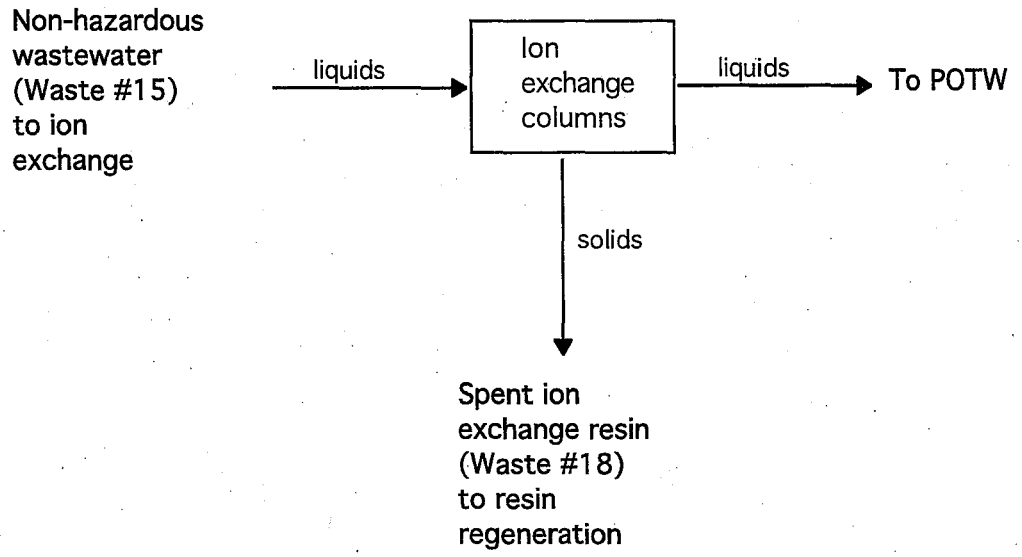
   d. Construction method for any treatment process unit (e.g., welded, cast, molded, etc.):

      Ion Exchange Columns = molded.
      Acid Neutralization Container = molded

e. Information concerning operation of treatment process units (e.g., manual, automatic, instrumentation, etc.).:

Both the ion exchange system and the resin regeneration system are manually operated; however, the ion exchange is a flow-through type of system in which the liquid wastewater automatically flows from the first ion exchange column to the second, third, and then the fourth and final container before being discharged back to one of the two treatment tanks for chemical analysis.

Block Flow Diagram
Ion Exchange Polishing Operation



2. Chemical treatment processes:

The chemical treatment process consists of pH neutralization of the ion exchange regenerate solutions.

a. Equipment used:

Acid Neutralization Container = 100-gallon capacity

b. Chemicals added:

Acid Neutralization Container = Caustic Soda, Wastes #16 and #17

c. Process type (e.g., batch, continuous, etc.): Batch treatment

d. Feed rate (e.g., gal/min., lb/hr., etc.):

Acid Neutralization System = 15 GPM (pump transfer speed)

e. Chemical reactions:

pH Neutralization Operation - Hydrochloric acid example only:

$HCl + NaOH \text{ ----> } H_2O + Na^+ + Cl^-$

f. Products and by-products for each chemical treatment process:

Resin regenerate solution, neutralized (Waste #19)

3. Physical treatment processes

a. Equipment used:

Ion Exchange/Resin Regeneration Columns (4) = 32 gallon capacity/column

b. Chemicals added:

Ion Exchange Operation - 60% Type I Strong Base Anion/40% Strong Acid Cation Resin: 3.6 cubic feet total mixed resin

Resin Regeneration Operation - inorganic acid (hydrochloric, nitric, and/or sulfuric), caustic soda

c. Process type (e.g., batch, continuous, etc.):

Ion Exchange Operation - Continuous

Resin Regeneration Operation - Batch treatment

d. Feed rate (e.g., gal/min, lb/hr, etc.): 15 GPM, as determined by the pump transfer rate.

e. Products and by-products for each of the physical treatment processes:

Nonhazardous wastewater effluent (Waste #15)
Resin regenerate solution, acidic (Waste # 16)
Resin regenerate solution, caustic (Waste # 17)
Spent ion exchange resin (Waste # 18)

4. For any treatment unit, furnish sampling data that shows the effectiveness of the treatment. This data should be based on sampling of untreated incoming hazardous waste and waste after treatment. The samples must be tested at a California state certified analytical laboratory.

Since this treatment process is not yet in operation at this facility, the data presented below is estimated data from a hypothetical facility treating wastes of this type.

Ion Exchange Process (metals removal efficiency)
Treatment efficiency is typically is about 70%.

pH Neutralization Process (pH neutralization efficiency)
pH prior to treatment = <
pH after to treatment = 9-10

Treatment efficiency = essentially 100%

5. Provide the following information concerning prevention of releases to the environment, per 22CCR 66270.14(b)(8).

a. Describe how the facility will prevent any releases of hazardous waste from reaching either the subsurface soil or the groundwater.

The ion exchange system is located within secondary containment system S003, which consists of a monolithic pour cement pad with berms and an epoxy coating, as detailed elsewhere in this permit application. This containment system is designed and operated in such a manner as to prevent any hazardous wastes, which may be released from reaching the environment.

b. Describe how the facility will prevent any releases of hazardous waste from reaching either surface soils, surface water or wetlands. See section 5.a. above.

c. Describe how the facility will prevent any releases of hazardous waste from reaching the air.

The ion exchange operation does not present a serious potential hazard of air release. In order to prevent the release of hazardous waste during the resin regeneration process, the resin columns have been equipped with a separate secondary containment system in order to prevent the acidic regeneration solution from inadvertently mixing with the cyanide based wastes being treated in the treatment tanks.

Finally, these treatment operations are performed under permit from the local air district (Bay Area Air Quality Management District).

6. Are there any containers used as treatment units located outside of secondary containment areas?

YES_____ NO__**X**__

E. IGNITABLE, CORROSIVE OR REACTIVE WASTE

Does the facility transfer, treat, or store ignitable, corrosive, or reactive waste?

YES__X__ NO_____. If yes, provide the following information:

1. On the facility plot plan, show the locations where containers holding ignitable or reactive hazardous wastes are being stored at the facility and their protective distances or buffer zone of at least 50 feet from the facility's property line, per 22CCR 66265.176 and 66270.15(b). See Section II, Attachment 5."The Facility Map".

2. Describe the precautions taken by the facility to prevent reactions involving ignitable or reactive wastes, which would result in any of the following, per 22CCR 66270.14(b)(9) and 66265.17.

   a. Generate extreme heat or pressure, fire or explosions, or violent reactions

   b. Produce uncontrolled flammable fumes, dusts or gases in sufficient quantities to threaten human health or the environment

   c. Produce uncontrolled flammable fumes or gases in sufficient quantity to pose a risk of fire or explosions

   d. Damage the structural integrity of the container or the facility

   e. Through other means threaten human health or the environment

   In order to prevent any of the above listed situations form occurring, the pH of all incoming hazardous waste solutions are checked to verify that no corrosive acid wastes are incorrectly stored or treated, as these materials are incompatible with the cyanide containing wastes accepted by, and generated at, the facility. Furthermore, the pH of all solutions is rechecked prior to mixing to ensure continued chemical compatibility. Additionally, solutions may be mixed in trial volumes first to verify chemical compatibility prior to complete mixing.

   The site maintains a very small quantity of acid materials on-site, only as necessary for gold purification and resin regeneration operations. All of the unused acid solutions for both the Gold Recovery System and Resin Regeneration System operations are stored outside the facility, in a dedicated secondary containment system (S003) that is located immediately adjacent to the Waste Water Treatment Area (S005). There is no storage or processing of cyanide materials in S003.

   The acid wastes generated from the Gold Recovery System operation (in S002) results in only very small volumes (less than 5-gallons per batch). These solutions are immediately neutralized, in a controlled and segregated local, by adjusting the pH from 9 to 10 using caustic soda in order to remove the reactivity hazard

Additionally, acid wastes are generated from the Resin Regeneration System operation (in S003) only infrequently (anticipated to be about once every 6-18 months, if needed), and this activity is carried out in a specially designed and segregated containment area. There is no authorized handling or storage of cyanide containing incompatible chemicals in this area. In other words, containment area S003 was designed to ensure that the infrequently generated acid wastes that are generated or required in the Resin Regeneration System operation are segregated from all potentially incompatible wastes (i.e. specifically, cyanide materials).

Containment area S003, the Resin Regeneration Area, has also been designed to provide an area to temporarily hold and store other cyanide incompatible hazardous waste or materials that may occasionally be generated or accidentally shipped to the facility.

The two adjacent corrosive hazardous materials storage areas, designed for the caustic and acids storage needs for the Waste treatment and resin regeneration process, can also be used to store or hold any unforeseen incompatible hazardous waste or materials wrongly shipped to the facility or generated onsite. Each of these three areas can hold up to eight 55-gallon drums each for a total of 24 drums if necessary in an emergency situation. (This total includes the resin regeneration area, the acid storage, and the caustic storage.)

SECTION V

FACILITY DESIGN TREATMENT

STANDARDIZED PERMIT APPLICATION

SECTION V - FACILITY DESIGN (TANKS)

For

J&B ENTERPRISES
CAD982052797

July 2011

SECTION V – FACILITY DESIGN (TREATMENT)

INTRODUCTION

This section discusses the tanks and equipment used to conduct the waste treatment operations. Each tank or piece of waste treatment equipment is discussed separately. The treatment processes conducted can briefly be described as follows:

- Repackaging and consolidation of solder dross materials

- Precious metal removal (via stripping of electronics scrap and printed circuit boards; note that this is not a hazardous waste treatment activity)

- Precious metal recovery by electowinning, concentrating, precipitation, and evaporation reclaimable solutions

- Precipitation and acid washing of precious metal solutions,

- And on rare occasion, waste treatment by pH adjustment, precipitation, filtering, and polishing in a waste treatment system

FACILITY DESIGN (TREATMENT) SECTIONS

SECTION ID	Page
CONCENTRATORS	3
PRECIPITATION TANKS	10
ELECTROWINNING TANKS	17
WASTE TREATMENT SYSTEM	24
CRUCIBLE FURNACE	31
EVAPORATOR	37

SECTION V – FACILITY DESIGN (TREATMENT) - CONCENTRATORS

A. Treatment Process Description and Flow Diagram

1. Treatment process: The concentrators are used to volumetrically reduce precious metal solutions for further treatment by heating and concentrating the solutions. Once concentrated, the solutions are further treated by precipitation, electrowinning, or evaporation.

a. Equipment used: Concentrators (C-1, C-2, C-3)

b. Chemicals added: None

c. Process type (e.g., batch, continuous, etc.): Batch treatment with topping off

d. Feed rate (e.g., gal/min., lb/hr., etc.): Estimated at 10-20 gpm (0 to 350 gallons per batch or top-off)

e. Chemical reactions, if any: Concentrators – None

f. Products and by-products for each chemical treatment process: Concentrated precious metal solutions

2. Flow Process Diagram: See Section II, Attachment 7, Process Flow Diagrams

a. All tanks are above ground

b. Tanks can be entered for inspection or repair as necessary. However, all of the tanks are small enough that they can be inspection from above.

c. Aisle space: 5'

d. No automatic or manual feed waste safety cutoff system is required as all containers and tanks are emptied and filled using portable pumps with an operator in attendance.

e. No tanks are stored outdoors without a roof or secondary containment.

f. There is no bypass system to a standby tank or a backup plan to prevent overfills. All tanks are manually managed using portable pumps and are located in secondary containment designed to catch and contain any accidental releases.

g. There are no pressurized waste tanks or containers.

h. Heated tanks have manually operated thermostats and high temperature sensors in the exhaust stacks that automatically shut off the burner if the temperature gets too high. There are ultraviolet sensors that automatically shut-off the gas supply in the event that the pilot light goes out.

i. There are no liquid level indicators used in heated tanks since the purpose of the tank is to remove water and reduce volume.

j. There are no tanks that contain the type of volatile hazardous wastes that would create pressure. In addition, the tanks are open and well vented so that no pressure can build up.

k. There are no metal hazardous waste tanks outdoors.

3. Data that shows the effectiveness of the treatment:

a. Influent waste analysis. All data in units of mg/liter, unless noted.

Analyses	Waste #1	#2	#3	#4	#8
pH	4.5-14	5-10	6-13.5	3.0-6.5	12-14
Cyanide (T)	50-100, 000	<250	<1	<1	4, 000-30, 000
Antimony	<5-500	<5	<5-500	<15	<1-100
Arsenic	<10-1, 000	<10	<10-1, 000	<5	<1-1, 000
Cadmium	<1-200	<1	<1-200	<1	<1-500
Copper	<1-10, 000	<1-250	<1-100	<1-100	100-10, 000
Lead	<1-1, 000	<10	<1-1, 000	<5	<5-600
Nickel	<1-5, 000	<1-100	<1-1, 000	<1-500	50-1, 000
Silver	<1-50, 000	<5	<1-250	<5	<1-50, 000
Thallium	<10-1, 000	<10	<10-1, 000	<5	<1-100
Zinc	<1-500	<1-100	<1-1, 000	<250	25-5, 000

b. Effluent waste analysis. The effluent differs from the influent only in that it is more concentrated. Analytical data is only available pre-concentration (see above), or post-precious metal precipitation, which differs from this treatment effluent primarily in that sodium hydrosulfite or zinc has been added to the solution, thereby precipitating the gold (along with trace concentrations of other metals. Example data below is in units of mg/liter, unless noted. Some variation in lab data will occur with each load.

E.g. Waste # 8 Lean Liquor (Concentrator Effluent - Post Precipitation)

Analyses	Result
pH	9-13.5
Cyanide (T)	1, 000-50, 000
Antimony	<5-500
Arsenic	<10-1, 000

Cadmium	<1-200
Copper	1-10, 000
Lead	<1-1, 000
Nickel	1-5, 000
Silver	<1-50, 000
Thallium	<10-1, 000
Zinc	<1-5, 000

4. Information concerning prevention of releases into the environment:

a. All hazardous waste activities are conducted indoors on hard, impermeable surfaces with or in secondary containment. This will prevent any releases of hazardous waste from reaching surface soils, surface water or wetlands.

b. The liquid wastes being reclaimed at the facility are water based with the pH carefully controlled and monitored so that there would be no releases of hazardous waste into the air.

B. HAZARDOUS WASTES TREATED

1. See Section III, the Waste Analyses Plan, Tables 2, 3, and 4 for the specifics on each waste stream. This information includes all of the following:

a. Common waste chemical name(s)
b. EPA and/or California hazardous waste number(s)
c. Specific gravity
d. Vapor pressure, if applicable
e. Flame point/auto-ignition temperature, if applicable
f. pH
g. Color

The waste streams that are primarily treated in the Concentrators are the following, which correspond with the Section III Tables. There may occasionally be other similar or like wastes that can be safely and compatibly treated in these tanks that may not be listed here.

Waste #1	Aqueous solutions with Cyanide and precious metals
Waste #2	Non-reactive dragout solutions w/precious metals
Waste #3	Non-cyanide precious metal solutions, non-acidic
Waste #4	Iodine Etch solutions
Waste #7	Photographic/Silver Solutions
Waste #8	Cyanide strip solutions, on-site generated
Waste #9	Precious metal precipitate residues
Waste #10	Precious metal precipitant supernatant/washwater
Waste #11	Acid purification solution, post treatment
Waste #12	Neutralized acid solution, on-site generated

C. TREATMENT DEVICE/EQUIPMENT DESCRIPTION

Devices or equipment used in each storage or treatment area: Concentrators. The permit is for three concentrators, C-1, C-2, and C-3. Only C-1 and C-3 are currently in place. C-2 is a placeholder in the permit for future use if needed. The physical characteristics of the tanks are as follows.

1. Internal dimensions

   C-1, C-2 = 4' x 3' x 3' (h)
   C-3 = 5' x 3'8" x 3' (h)

   External dimensions

   C-1, C-2 = 4'4" x 3'2" x 3'4" (h)
   C-3 = 5'4" x 4' x 3'2" (h)

2. Internal design capacity in gallons

   C-1, C-2 = 256 gallons total and 190 gallons operational Capacity.
   C-3 = 398 gallons total and 320 gallons operational capacity with 8" freeboard

3. Shell thickness such as wall, top, and bottom in inches

   Wall = 1/8" Top = n/a Bottom = 1/8'

4. Age of each tank (new or from the operating records of the facility)

   C-1 = 25 years old
   C-2 = 1.5 years old
   C-3 = 0 years old (placeholder)

5. Operating temperature of each tank in degrees Fahrenheit (from design or from operating records) and operating pressure in psi

   Temperature: Ambient up to 212 °F

6. If the equipment will be coated or lined, describe the lining and/or coating material and thickness used inside or outside.

   Response: Not applicable. Not lined or coated.

D. SECONDARY CONTAINMENT DESIGN

The Concentrators are double-walled stainless steel tanks, so the wastes being treated in them are secondarily contained. The Concentrators are located in S002, the Gold Processing Room that is the storage and waste processing area, which provides another level of secondary containment. The secondary containment system exceeds 150% of the largest container and 10% of the total aggregate volume. See Section II, Attachment 1.

14.1 Freitas + Freitas Engineering and Planning Consultants, *"Tank System Assessments"*, November 24, 2010 (17 pages)

14.2 Robinson and Associates, *"J&B Enterprises, 1650 Russell Avenue, Santa Clara Design Certification of Hazardous Waste Treatment and Storage Facility"*, July 10, 2001 (25 pages)

14.3 Habitec Architectural & Planning, *"J&B Enterprises T.I., Phase IV – Hazmat"* Plans, January 12, 2001 (7 pages)

14.4 T Square Consulting Group, Inc., *"Structural Calculations for J&B Enterprises, 1650 Russell Ave., Santa Clara, CA"*, August 21, 2003 (26 pages)

14.5 Shad Engineers, *"Structural Calculations for J&B Enterprises, 342 Laurelwood Ave., Santa Clara, CA"*, August 21, 2003 (6 pages)

14.6 California Environmental Management Service Co., Inc., *"UBC Containment Calculations for Hazardous Materials and Sprinkler Water"*, March 3, 2001 rev. (5 pages)

14.7 Tera Lite Inc., *"Tera-Gem III Troweled Chemical Resistance Floor System (CRS)"*, July 31, 2000 (22 pages)

E. TREATMENT OF IGNITABLE, CORROSIVE, OR REACTIVE HAZARDOUS WASTE

1. The facility does not handle ignitable hazardous wastes, and the only corrosives are those with a pH of 12 or greater (no acid corrosives are treated). All hazardous waste storage and treatment are conducted inside the building or in roofed enclosures, and the storage areas are more than 50 feet distance from the property lines. See Section II, Attachment 5, the Facility Map and Section II, Attachment 14 Architectural and Engineering Drawings and Reports.

2. The concentrator tanks are located in S002, the precious metal recovery room which is designed for H2 Hazardous Occupancy with 1-hour fire resistant walls, and 2-hour fire resistant doors, emergency lighting and ventilation, general room exhaust (minimum

6 air changes per hour), and a backup generator that automatically operates if there is any power loss.

a. The waste treated at this facility is not flammable, explosive, or prone to violent reactions. The wastes are segregated and no incompatible hazardous waste can accidentally mix and react. No acid corrosive wastes are accepted at the facility for storage, transfer, or treatment. There is a designated and physically isolated "acid" corrosive storage area in S003 for chemicals needed for resin regeneration and another small container stored in the Acid Wash/Fume Hood inside of S002.

b. These wastes do not generate or produce uncontrolled flammable fumes, dusts, or gases in sufficient quantities to threaten human health and/or the environment.

c. These wastes do not produce uncontrolled flammable fumes or gases in sufficient quantity to pose a risk of fire or explosions.

d. These wastes do not damage the structural integrity of the container or the facility.

e. These wastes do not, through any other means, threaten human health or the environment.

F. SPECIFIC AIR EMISSIONS

J&B Enterprises has air quality permits from the Bay Area Air Quality Management District (BAAQMD) for the following:

Plant Number: 12625
Crucible Furnace, Application number 1311(Exempt)
Evaporator, Application number 1311
Concentrator Tanks, Application number 1655, (Exempt)
Two Strip Tanks, Application number 1311 (Exempt)
Purification Process – Water and Acid Washes, Application number 1311 (Exempt)
Reciprocating Engine, Cooled Gas Backup Engine Generator , Application number 5366
Waste Water Treatment System, Application number 1311 (Exempt)

The BAAQMD was contacted regarding RCRA Subparts AA, BB, CC compliance. J&B's assigned permit engineer, Ms. Thu Bui, informed us that the District did not have a RCRA Subparts AA, BB, CC compliance requirement. Consultation with Region IX EPA RCRA Inspector, Mr. Kaoru Morimoto, concurred with our review of the AA BB CC regulation that it does not apply to the wastes, equipment, or practices at J&B Enterprises. Air emission controls are not required for J&B storage tanks and containers.

G. ENGINEERS CERTIFICATIONS

Independent, qualified professional engineers registered in the State of California have prepared tank and secondary containment integrity certification. The certifications are in Section II, Attachment 14 Architectural and Engineering Drawings and Reports. Specifically see the following:

14.1 Freitas + Freitas Engineering and Planning Consultants, *"Tank System Assessments"*, November 24, 2010

14.2 Robinson and Associates, *"J&B Enterprises, 1650 Russell Avenue, Santa Clara Design Certification of Hazardous Waste Treatment and Storage Facility"*, July 10, 2001

H. ENGINEERS QUALIFICATIONS

Same as G above. The engineers used to complete the certifications are registered professional engineers (PE's) in the State of California.

SECTION V – FACILITY DESIGN (TREATMENT) - PRECIPITATION TANKS

A. Treatment Process Description and Flow Diagram

1. Treatment process: These tanks are used for precipitation, holding, and transfer of precious metal bearing solutions from clients. Wastes may be treated in them directly, or transferred to another treatment process, such as the acid wash/fume hood, electrowinning, concentration, or evaporation.

a. Equipment used: Precipitation Tanks (T-1, T-2, T-3, T-4, T-5, T-6)

b. Chemicals added: Sodium Hydrosulfite, Sodium Hydroxide, Hydrochloric Acid

c. Process type (e.g., batch, continuous, etc.): Batch treatment

d. Feed rate (e.g., gal/min., lb/hr., etc.): Estimated at 10-20 gpm (0 to 200 gallons per batch, but typically 50 gallons)

e. Chemical reactions involved. Gold precipitation (2 methods). The two gold precipitation reactions used at the facility take place in an aqueous solution with an alkaline pH, and are represented as follows.

(1) Zinc aided gold precipitation
$2\ Au^+ + Zn(s) \longrightarrow 2\ Au(s) + Zn^{2+}$

(2) Hydrosulfite aided gold precipitation
$2\ Au^+ + NaHSO_3(s) + OH^-\ (excess) \longrightarrow 2\ Au^+ + H_2O + Na^+ + SO_3^{2-} + OH^- \longrightarrow$
$2\ Au(s) + SO_4^{2-} + Na^+ + H_2O + OH^-$

The treatment efficiency for the gold reclamation process is essentially 100%.

f. Products and by-products for each chemical treatment process: Concentrated precious metal solutions in the form of gold with other metals such as silver, platinum, copper, nickel, and a waste solution with trace metals, sulfide, and water.

2. Flow Process Diagram: See Section II, Attachment 7, Process Flow Diagrams

a. All tanks are above ground.

b. Tanks can be entered for inspection or repair as necessary. However, all of the tanks are small enough that they can be inspected from above.

c. Aisle space: 5'

d. No automatic or manual feed waste safety cutoff system is required as all containers and tanks are emptied and filled using portable pumps with an operator in attendance.

e. No tanks are stored outdoors without a roof and secondary containment.

f. There is no bypass system to a standby tank or a backup plan to prevent overfills. All tanks are manually managed using portable pumps and are located in secondary containment designed to catch and contain any accidental releases.

g. There are no pressurized waste tanks or containers.

h. These tanks operate at ambient temperature.

i. There are no liquid level indicators used. The tanks are manually filled using a portable pump or by pouring (if the quantity is small).

j. There are no tanks that contain the type of volatile hazardous wastes that would create pressure. In addition, the tanks are open and well vented so that no pressure can build up.

k. There are no metal hazardous waste tanks outdoors.

3. Data that shows the effectiveness of the treatment:

a. Influent waste analysis. All data in units of mg/liter, unless noted.

Analyses	Waste #1	#2	#3	#4	#8
pH	4.5-14	6-13.5	3.0-6.5	12-14	9-13.5
Cyanide (T)	50-100, 000	<1	<1	4, 000-30, 000	1, 000-50, 000
Antimony	<5-500	<5-500	<15	<1-100	<5-500
Arsenic	<10-1, 000	<10-1, 000	<5	<1-1, 000	<10-1, 000
Cadmium	<1-200	<1-200	<1	<1-500	<1-200
Copper	<1-10, 000	<1-100	<1-100	100-10, 000	1-10, 000
Lead	<1-1, 000	<1-1, 000	<5	<5-600	<1-1, 000
Nickel	<1-5, 000	<1-1, 000	<1-500	50-1, 000	1-5, 000
Silver	<1-50, 000	1-250	<5	<1-50, 000	<1-50, 000
Thallium	<10-1, 000	<10-1, 000	<5	<1-100	<10-1, 000
Zinc	<1-500	<1-1, 000	<250	25-5, 000	<1-5, 000

b. Effluent waste analysis. The data below is in units of mg/liter unless otherwise noted. Some variation in lab data will occur with each load. The effluent produced by this treatment process is the precious metal free Lean Liquor waste; the supernatant and the mud. There is also a processing intermediary formed during this process, the precious metal rich mud. The lab data presented for the mud below is for the mud post-purification, which is the next step after the treatment conducted herein.

Analyses	Waste #9	#10
pH	N/A	8-14
Cyanide (T)	<1	1, 000-50, 000
Antimony	<1-100	<1-100
Arsenic	<1-50	<1-1, 000
Cadmium	1-200	<1-500
Chromium	1-25	<1-4
Copper	1,000-10, 000	80-20, 000

4. Information concerning prevention of releases into the environment:

a. All hazardous waste activities are conducted indoors on hard, impermeable surfaces with or in secondary containment. This will prevent any releases of hazardous waste from reaching surface soils, surface water or wetlands.

b. The liquid wastes being reclaimed at the facility are water based with the pH carefully controlled and monitored so that there would be no releases of hazardous waste into the air.

B. HAZARDOUS WASTES TREATED

1. See Section III, the Waste Analyses Plan, Tables 2, 3, and 4 which contain the specifics on each waste stream. This information includes all of the following:

a. Common waste chemical name(s)
b. EPA and/or California hazardous waste number(s)
c. Specific gravity
d. Vapor pressure, if applicable
e. Flame point/auto-ignition temperature, if applicable
f. pH
g. Color

The waste streams that are primarily treated in the Precipitation Tanks are the following, which correspond with the Section III Tables. There may occasionally be other similar or like wastes that can be safely and compatibly treated in these tanks that may not be listed here.

Waste #1	Aqueous solutions with Cyanide and precious metals
Waste #2	Non-reactive dragout solutions w/precious metals
Waste #3	Non-cyanide precious metal solutions, non-acidic
Waste #4	Iodine Etch solutions
Waste #7	Photographic/Silver Solutions
Waste #8	Cyanide strip solutions, on-site generated
Waste #9	Precious metal precipitate residues

Waste #10	Precious metal precipitant supernatant/washwater
Waste #11	Acid purification solution, post treatment
Waste #12	Neutralized acid solution, on-site generated

C. TREATMENT DEVICE/EQUIPMENT DESCRIPTION

Devices or equipment used in each storage or treatment area: There are six precipitation tanks permitted with a seventh one proposed to be added. These tanks are used to hold and treat solutions and to transfer process waste between tanks. Their primary use is for precipitation. The physical characteristics of the tanks are as follows. (See Section II, Attachment 8 for the Manufacturers Specifications, Ryan Herco, Model 7110, sizes 040, 030, 020, 011, and Attachment 14 for details.)

1. Internal and/or external dimensions in feet and inches

Internal dimensions	T-1, T-2	=	31" (d) x 48" (h)
External dimensions	T-1, T-2	=	31.5" (d) x 50" (h) with plug lip
Internal dimensions	T-3, T-4	=	27" (d) x 42" (h)
External dimensions	T-3, T-4	=	27.5" (d) x 44" (h) with plug lip
Internal dimensions	T-5, T-6	=	22" (d) x 34" (h)
External dimension.	T-5, T-6	=	22.5" (d) x 36" (h) with plug lip
Internal dimensions	T-7	=	36" (d) x 48" (h)
External dimensions	T-7	=	36.5" (d) x 50" (h) w/plug lip

2. Internal design capacity in gallons

T-1 = 150 gallons (RH030)	T-5 = 50 gallons (RH016)
T-2 = 150 gallons (RH030)	T-6 = 50 gallons (RH016)
T-3 = 100 gallons (RH020)	T-7 = 200 gallons (RH040)
T-4 = 100 gallons (RH020)	

3. Shell thickness such as wall, top, and bottom in inches

Wall	T-1, T-2, T-3, T-4, T-5, T-6 = 1/4" T-7 = 5/16"
Top	Not applicable. Open top tanks.
Bottom	T-1, T-2, T-3, T-4, T-5, T-6 = 1/2" T-7 = 5/16"

4. Age of each tank (new or from the operating records of the facility)

   T-1, T-2 = 26 years
   T-3, T-4, T-5, T-6 = 10 years
   T-7 = New or 0 years (not purchased as of the date of submission of this OP)

5. Operating temperature of each tank in degrees Fahrenheit (from design or from operating records) and operating pressure in psi

   Temperature: Ambient psi: Ambient

6. If the equipment will be coated or lined, describe the lining and/or coating material and thickness used inside or outside.

   Response: Not applicable. Not lined or coated.

D. SECONDARY CONTAINMENT DESIGN

The Precipitation Tanks are located in S002, the Gold Processing Room that is the storage and waste processing area. The secondary containment consists of a concrete floor and berming, and a collection sump,. The floor is sealed with a chemical resistant concresive epoxy coating and is sloped to drain to the sump. The secondary containment system exceeds 150% of the largest container and 10% of the total aggregate volume, and can hold 20 minutes of sprinkler water runoff should there be a fire. See Section II, Attachment 14:

14.1 Freitas + Freitas Engineering and Planning Consultants, *"Tank System Assessments"*, November 24, 2010 (17 pages)

14.2 Robinson and Associates, *"J&B Enterprises, 1650 Russell Avenue, Santa Clara Design Certification of Hazardous Waste Treatment and Storage Facility"*, July 10, 2001 (25 pages)

14.3 Habitec Architectural & Planning, *"J&B Enterprises T.I., Phase IV – Hazmat"* Plans, January 12, 2001 (7 pages)

14.4 T Square Consulting Group, Inc., *"Structural Calculations for J&B Enterprises, 1650 Russell Ave., Santa Clara, CA"*, August 21, 2003 (26 pages)

14.5 Shad Engineers, *"Structural Calculations for J&B Enterprises, 342 Laurelwood Ave., Santa Clara, CA"*, August 21, 2003 (6 pages)

14.6 California Environmental Management Service Co., Inc., *"UBC Containment Calculations for Hazardous Materials and Sprinkler Water"*, March 3, 2001 rev. (5 pages)

14.7 Tera Lite Inc., *"Tera-Gem III Troweled Chemical Resistance Floor System (CRS)"*, July 31, 2000 (22 pages)

E. TREATMENT OF IGNITABLE, CORROSIVE, OR REACTIVE HAZARDOUS WASTE

1. The facility does not handle ignitable hazardous wastes, and the only corrosives are those with a pH of 12 or greater (no acid corrosives are treated). All hazardous waste storage and treatment is conducted inside of the building or in roofed enclosures and the storage areas are more than 50 feet distance from the property lines. See Section II, Attachment 5, the Facility Map, Attachment 8, Tank & Container Information, Ryan Herco, and Attachment 14, Architectural and Engineering Drawings and Reports.

2. The precipitation tanks are located in S002, the precious metal recovery room which is designed as H2 Hazardous Occupancy with 1-hour fire resistant walls, and 2-hour fire resistant doors, emergency lighting and ventilation, general room exhaust (minimum 6 air changes per hour). and a backup generator that automatically operates if there is any power loss.

a. The waste treated at this facility is not flammable, explosive, or prone to violent reactions. The wastes are segregated and no incompatible hazardous waste can accidentally mix and react. No acid corrosive wastes are accepted at the facility for storage, transfer, or treatment. There is a designated and physically isolated "acid" corrosive storage areas in S003 for chemicals needed for resin regeneration and another small container stored in the Acid Wash/Fume Hood inside of S002.

b. These wastes do not generate or produce uncontrolled flammable fumes, dusts, or gases in sufficient quantities to threaten human health or the environment.

c. These wastes do not produce uncontrolled flammable fumes or gases in sufficient quantity to pose a risk of fire or explosions.

d. These wastes do not damage the structural integrity of the container or the facility.

e. These wastes do not through other means threaten human health or the environment.

F. SPECIFIC AIR EMISSIONS

J&B Enterprises has air quality permits from the Bay Area Air Quality Management District (BAAQMD) for the following:

Plant Number: 12625
Crucible Furnace, Application number 1311(Exempt)
Evaporator, Application number 1311

Concentrator Tanks, Application number 1655, (Exempt)
Two Strip Tanks, Application number 1311 (Exempt)
Purification Process – Water and Acid Washes, Application number 1311 (Exempt)
Reciprocating Engine, Cooled Gas Backup Engine Generator , Application number 5366
Waste Water Treatment System, Application number 1311 (Exempt)

The BAAQMD was contacted regarding RCRA Subparts AA, BB, CC compliance. J&B's assigned permit engineer, Ms. Thu Bui, informed us that the District did not have a RCRA Subparts AA, BB, CC compliance requirement. Consultation with Region IX EPA RCRA Inspector, Mr. Kaoru Morimoto, concurred with our review of the AA BB CC regulation that it does not apply to the wastes, equipment, or practices at J&B Enterprises. Air emission controls are not required for J&B storage tanks and containers.

G ENGINEERS CERTIFICATIONS

Independent, qualified professional engineers registered in the State of California have prepared tank and secondary containment integrity certification. The certifications are in Section II, Attachment 14 Architectural and Engineering Drawings and Reports.

H ENGINEERS QUALIFICATIONS

Same as G above. The engineers used to complete the certifications are registered professional engineers (PE's) in the State of California.

SECTION V – FACILITY DESIGN (TREATMENT) - ELECTROWINNING TANKS

A. Treatment Process Description and Flow Diagram

1. Treatment process: These tanks are used for electrowinning of precious metal bearing solutions from clients and the strip solutions generated at J&B Enterprises. Wastes may be treated in them directly, or transferred to another treatment process, such as the acid wash/fume hood, electrowinning, concentration, or even evaporation.

a. Equipment used: Electrowinning Tanks (EW-1, EW-2, EW-3)

b. Chemicals added: None

c. Process type (e.g., batch, continuous, etc.): Batch treatment

d. Feed rate (e.g., gal/min., lb/hr., etc.): Estimated at 10-20 gpm (up to 500 gallons per batch)

e. Chemical reactions involved. None. Precious metals are electrowinned from solutions onto cathodes. The treatment efficiency for the gold reclamation process is essentially 100%.

f. Products and by-products for each chemical treatment process: Waste metal solutions in which the gold has been removed cathodically. There may be other metals such as nickel, silver, platinum, and copper in the waste solution, generally as trace metals, also some sulfide and mostly water.

2. Flow Process Diagram: See Section II, Attachment 7, Process Flow Diagrams

a. All tanks are above ground.

b. Tanks can be entered for inspection or repair as necessary. However, all of the tanks are small enough that they can be inspected from above.

c. Aisle space: 5'

d. No automatic or manual feed waste safety cutoff system are required, all containers and tanks are emptied and filled using portable pumps with an operator in attendance.

e. No tanks are stored outdoors without a roof and secondary containment.

f. There is no bypass system to a standby tank or a backup plan to prevent overfills. All tanks are manually managed using portable pumps and are located in secondary containment designed to catch and contain any accidental releases.

g. There are no pressurized waste tanks or containers.

h. These tanks operate at ambient temperature.

i. There are no liquid level indicators used. The tanks are manually filled using a portable pump or by pouring (if the quantity is small).

j. There are no tanks that contain the type of volatile hazardous wastes that would create pressure. In addition, the tanks are open and well vented so that no pressure can build up.

k. There are no metal hazardous waste tanks outdoors.

3. Data that shows the effectiveness of the treatment:

a. Influent waste analysis. All data in units of mg/liter, unless noted.

Analyses	Waste #1	#3	#4	#8	Conc. Sol.
pH	4.5-14	6-13.5	3.0-6.5	12-14	9-13.5
Cyanide (T)	50-100, 000	<1	<1	4, 000-30, 000	1, 000-50, 000
Antimony	<5-500	<5-500	<15	<1-100	<5-500
Arsenic	<10-1, 000	<10-1, 000	<5	<1-1, 000	<10-1, 000
Cadmium	<1-200	<1-200	<1	<1-500	<1-200
Copper	<1-10, 000	<1-100	<1-100	100-10, 000	1-10, 000
Lead	<1-1, 000	<1-1, 000	<5	<5-600	<1-1, 000
Nickel	<1-5, 000	<1-1, 000	<1-500	50-1, 000	1-5, 000
Silver	<1-50, 000	1-250	<5	<1-50, 000	<1-50, 000
Thallium	<10-1, 000	<10-1, 000	<5	<1-100	<10-1, 000
Zinc	<1-500	<1-1, 000	<250	25-5, 000	<1-5, 000

b. Effluent waste analysis. The data below is in units of mg/liter unless otherwise noted. Some variation in lab data will occur with each load.

Analyses	#10 (mg/L)	Gold plates (70 - 98%)
Cyanide (T)	45	0
Antimony	ND	0
Arsenic	ND	0
Cadmium	ND	0
Chromium	4.3	0
Copper	ND	30-37%
Lead	ND	0
Nickel	24	0
Silver	ND	0

Thallium	ND	0
Zinc	ND	0

4. Information concerning prevention of releases into the environment:

a. All hazardous waste activities are conducted indoors on hard, impermeable surfaces with or in secondary containment. This will prevent any releases of hazardous waste from reaching surface soils, surface water or wetlands.

b. The liquid wastes being reclaimed at the facility are water based with the pH carefully controlled and monitored so that there would be no releases of hazardous into the air.

B. HAZARDOUS WASTES TREATED

1. See Section III, the Waste Analyses Plan, Tables 2, 3, and 4 which contain the specifics on each waste stream. This information includes all of the following:

a. Common waste chemical name(s)
b. EPA and/or California hazardous waste number(s)
c. Specific gravity
d. Vapor pressure, if applicable
e. Flame point/auto-ignition temperature, if applicable
f. pH
g. Color

The waste streams that are primarily treated in the Electrowinning units are the following, which correspond with the Section III Tables. There may occasionally be other similar or like wastes that can be safely and compatibly treated in these tanks that may not be listed here.

Waste #1	Aqueous solutions with Cyanide and precious metals
Waste #2	Non-reactive dragout solutions w/precious metals
Waste #3	Non-cyanide precious metal solutions, non-acidic
Waste #4	Iodine Etch solutions
Waste #7	Photographic/Silver Solutions
Waste #8	Cyanide strip solutions, on-site generated
Waste #9	Precious metal precipitate residues
Waste #10	Precious metal precipitant supernatant/washwater
Waste #11	Acid purification solution, post treatment
Waste #12	Neutralized acid solution, on-site generated

C. TREATMENT DEVICE/EQUIPMENT DESCRIPTION

Devices or equipment used in each storage or treatment area: Electrowinning Units. The permit is for three Electrowinning tanks, EW-1, EW-2, and EW-3. Only EW-1 and EW-2 are currently in place. EW-3 is a placeholder in the permit for future use if needed. The physical characteristics of the tanks are as follows. See Section II, Attachment 14, the Architectural and Engineering Drawings and Reports.

1. Internal and/or external dimensions in feet and inches.

   Internal dimensions
   Electrowinning Tanks = 4'6" x 4'6" x 4'6" (h)
   Electrowinning Unit = 2' x 1'10" x 2'4" (h) – (These are mounted directly on the tanks.)

   External dimensions
   Electrowinning Tanks = 4'7" x 4'7" x 4'6.5" (h)

2. Internal design capacity in gallons

   Electrowinning Tanks = 682 gallons
   Electrowinning Unit = 64 gallons
   Operational Capacity = 530 gallons with 1' freeboard

3. Shell thickness such as wall, top, and bottom in inches

   Wall = 1/4" Top = 1/2" Bottom = 1/2"

4. Age of each tank (new or from the operating records of the facility)

   EW-1 & EW-2 = 17 years.[1]
   EW-3 = 0 years (not purchased as of the date of submission of this OP)

5. Operating temperature of each tank in degrees Fahrenheit (from design or from operating records) and operating pressure in psi

   Temperature: Ambient
   psi: Ambient

6. If the equipment will be coated or lined, describe the lining and/or coating material and thickness used inside or outside.

   Response: Not applicable. Not lined or coated.

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[1] Note. In the 2001 permit, these were listed as first being used in 1990, which was not correct. They were first used in 1997, so the estimated life has been adjusted to reflect this.

D. SECONDARY CONTAINMENT DESIGN

The Electrowinning Tanks (EW 1 – 3) are used in the reclamation of precious metal from solutions as a solid metal product (plated to a cathodes) which may be melted and poured into ingots for resale. The solutions treated in the tank are from plating, stripping, rinsing, precipitation, and other sources. The EW tanks are located in S002, the Gold Processing Room that is the storage and waste processing area, which provides secondary containment. The secondary containment system exceeds 150% of the largest container and 10% of the total aggregate volume. See Section II, Attachment 14.

14.1 Freitas + Freitas Engineering and Planning Consultants, *"Tank System Assessments"*, November 24, 2010 (17 pages)

14.2 Robinson and Associates, *"J&B Enterprises, 1650 Russell Avenue, Santa Clara Design Certification of Hazardous Waste Treatment and Storage Facility"*, July 10, 2001 (25 pages)

14.3 Habitec Architectural & Planning, *"J&B Enterprises T.I., Phase IV – Hazmat"* Plans, January 12, 2001 (7 pages)

14.4 T Square Consulting Group, Inc., *"Structural Calculations for J&B Enterprises, 1650 Russell Ave., Santa Clara, CA"*, August 21, 2003 (26 pages)

14.5 Shad Engineers, *"Structural Calculations for J&B Enterprises, 342 Laurelwood Ave., Santa Clara, CA"*, August 21, 2003 (6 pages)

14.6 California Environmental Management Service Co., Inc., *"UBC Containment Calculations for Hazardous Materials and Sprinkler Water"*, March 3, 2001 rev. (5 pages)

14.7 Tera Lite Inc., *"Tera-Gem III Troweled Chemical Resistance Floor System (CRS)"*, July 31, 2000 (22 pages)

E. TREATMENT OF IGNITABLE, CORROSIVE, OR REACTIVE HAZARDOUS WASTE

1. The facility does not handle ignitable hazardous wastes, and the only corrosives are those with a pH of 12 or greater (no acid corrosives are treated). All hazardous waste storage and treatment is conducted inside the building or in roofed enclosures and the storage areas are more than 50 feet distance from the property lines. See Section II, Attachment 5, the Facility Map and Attachment 14, Architectural and Engineering Drawings and Reports.

2. The electrowinning tanks are located in S002, the Precious Metal Recovery Room which is designated H2 Hazardous Occupancy with 1-hour fire resistant walls, and 2-hour fire

resistant doors, emergency lighting and ventilation, general room exhaust (minimum 6 air changes per hour), and a backup generator that automatically operates if there is any power loss.

a. The waste treated at this facility is not flammable, explosive, or prone to violent reactions. The wastes are segregated and no incompatible hazardous waste can accidentally mix and react. No acid corrosive wastes are accepted at the facility for storage, transfer, or treatment. There is a designated and physically isolated "acid" corrosive storage areas in S003 for chemicals needed for resin regeneration and another small container stored in the Acid Wash/Fume Hood inside of S002.

b. These wastes do not generate or produce uncontrolled flammable fumes, dusts, or gases in sufficient quantities to threaten human health and/or the environment.

c. These wastes do not produce uncontrolled flammable fumes or gases in sufficient quantity to pose a risk of fire or explosions.

d. These wastes do not damage the structural integrity of the container or the facility.

e. These wastes do not through other means threaten human health or the environment.

F. SPECIFIC AIR EMISSIONS

J&B Enterprises has air quality permits from the Bay Area Air Quality Management District (BAAQMD) for the following:

Plant Number: 12625
Crucible Furnace, Application number 1311(Exempt)
Evaporator, Application number 1311
Concentrator Tanks, Application number 1655, (Exempt)
Two Strip Tanks, Application number 1311 (Exempt)
Purification Process – Water and Acid Washes, Application number 1311 (Exempt)
Reciprocating Engine, Cooled Gas Backup Engine Generator , Application number 5366
Waste Water Treatment System, Application number 1311 (Exempt)

The BAAQMD was contacted regarding RCRA Subparts AA, BB, CC compliance. J&B's assigned permit engineer, Ms. Thu Bui, informed us that the District did not have a RCRA Subparts AA, BB, CC compliance requirement. Consultation with Region IX EPA RCRA Inspector, Mr. Kaoru Morimoto, concurred with our review of the AA BB CC regulation that it does not apply to the wastes, equipment, or practices at J&B Enterprises. Air emission controls are not required for J&B storage tanks and containers.

G. ENGINEERS CERTIFICATIONS

Independent, qualified professional engineers, registered in the State of California have prepared tank and secondary containment integrity certification. The certifications are in Section II, Attachment 14 "Architectural and Engineering Drawings and Reports."

H. ENGINEERS QUALIFICATIONS

Same as G above. The engineers used to complete the certifications are registered professional engineers (PE's) in the State of California.

SECTION V FACILITY DESIGN (TREATMENT) - WASTE TREATMENT SYSTEM

A. Treatment Process Description and Flow Diagram

1. Treatment process: These tanks may be used for fnal treatment of previously treated precious metal solutions (which have had their valuable metals removed) and/or untreatable hazardous wastes from clients, and the previously treated strip solutions generated at J&B Enterprises. Wastes may be treated in them directly, or transferred to another treatment process, such as the acid wash/fume hood, electrowinning, concentration, or even evaporation, or shipped off-site to another facility. This system is not used on a regular basis, but serves as an optional treatment should it be needed. A secondary function is that these tanks serve as emergency and temporary holding tanks for solutions. No routine or long-term storage is done in these tanks.

a. Equipment used: Waste Treatment System Tanks (WTS-1, WTS-2), filter press, pumps, and two ion exchange columns. (Note: See Section IV, Sheets 3 and 4 for information on the filter press and ion exchange units.)

b. Chemicals added: Calcium Hypochlorite, Ferrous Sulfate, Sodium Hydroxide, Hydrochloric Acid, Polymer

c. Process type (e.g., batch, continuous, etc.): Batch treatment

d. Feed rate (e.g., gal/min., lb/hr., etc.): Estimated at 10-20 gpm. (up to 1250 gallons per batch, 2 batches simultaneously)

e. Chemical reactions involved. pH neutralization and adjustment, flocculation, settling (precipitation), filtration, and ion exchange

f. Products and by-products for each chemical treatment process: Waste water with trace heavy metals and filter cakes, with metal hydroxides.

2. Flow Process Diagram: See Section II, Attachment 7, Process Flow Diagrams

a. All tanks are above ground.

b. Tanks can be entered for inspection or repair as necessary. However, all of the tanks are small enough that they can be inspected from above.

c. Aisle space: 5'

d. No automatic or manual feed waste safety cutoff system are required, all containers and tanks are emptied and filled using portable pumps with an operator in attendance.

e. No tanks are stored outdoors without a roof and secondary containment.

f. There is no bypass system to a standby tank or a backup plan to prevent overfills. All tanks are manually managed using portable pumps and are located in secondary containment designed to catch and contain any accidental releases.

g. There are no pressurized waste tanks or containers.

h. These tanks operate at ambient temperature.

i. There are no liquid level indicators used. The tanks are manually filled using a portable pump.

j. There are no tanks that contain the type of volatile hazardous wastes that would create pressure. In addition, the tanks are open and well vented so that no pressure could build up.

k. There are no metal hazardous waste tanks outdoors.

3. Data that shows the effectiveness of the treatment:

a. Influent waste analysis. All data in units of mg/liter, unless noted.

Analyses	Waste #10	Waste #12
pH	9-14	9-12
Cyanide (T)	1, 000-50, 000	<1
Antimony	<1-100	<1-100
Arsenic	<1-1, 000	<1-1, 000
Beryllium	<1-50	<1-50
Cadmium	<1-500	<1-500
Copper	100-10, 000	100-20, 000
Lead	<1-4, 000	4-6, 000
Nickel	50-10, 000	1-1, 000
Silver	<1-1, 000	<1-1, 000
Thallium	<1-100	<1-100
Zinc	10-50, 000	10-100, 000

b. Effluent waste analysis. The data below is in units of mg/liter unless otherwise noted. Some variation in lab data will occur with each load. The effluent produced by this treatment process is regulated wastewater. There is also a processing intermediary formed during this process, the sludge and filter cake.

Analyses	Waste #10	Waste #12
pH	9-12	9-12
Cyanide (T)	<1 mg/kg	<0.5 mg/lit
Antimony	<1-1, 000	<5
Arsenic	<1-1, 000	<1
Beryllium	<1-1, 000	<0.75
Cadmium	<1-1, 000	<0.7
Chromium		<2.77
Copper	100-100, 000	<0.4
Lead	<1-2, 000	<0.4
Nickel	50-50, 000	<0.5
Silver	<1-1, 000	<0.7
Thallium	<1-1, 000	
Zinc	10-50, 000	<2.6

4. Information concerning prevention of releases into the environment:

a. All hazardous waste activities are conducted indoors on hard, impermeable surfaces with or in secondary containment. This will prevent any releases of hazardous waste from reaching surface soils, surface water or wetlands.

b. The liquid wastes being treated in the waste water treatment system at the facility are water based with the pH carefully controlled and monitored so that there would be no releases of hazardous waste into the air.

B. HAZARDOUS WASTES TREATED

1. See Section III, the Waste Analyses Plan, Tables 2, 3, and 4 which contain the specifics on each waste stream. This information includes all of the following:

a. Common waste chemical name(s)
b. EPA and/or California hazardous waste number(s)
c. Specific gravity
d. Vapor pressure, if applicable
e. Flame point/auto-ignition temperature, if applicable
f. pH
g. Color

The waste streams that are treated in the wastewater treatment system consist of heavy metal solutions that have had their precious metal content removed, or hazardous wastes that cannot be treated through the usual metal recovery processes. These wastes correspond with the Section III Tables. These waste may have been treated by one or more of the following methods: concentration, electrowinning, precipitation, stripping, or may not have had any treatment at all. (i.e. The wastes could be hazardous waste such as dragout from a clients rinsing

operations that has been determined to have no economic value, or which may not be deemed acceptable to be treated in the other treatment units for some other reason, such as odor, cross-contamination, or the possibility that it could damaged the equipment.) There may occasionally be other similar or like wastes that can be safely and compatibly treated in these tanks that may not be listed here.

Waste #1	Aqueous solutions with Cyanide and precious metals – post processing
Waste #2	Non-reactive dragout solutions w/precious metals – post processing
Waste #3	Non-cyanide precious metal solutions, non-acidic – post processing
Waste #4	Iodine Etch solutions – post processing
Waste #7	Photographic/Silver Solutions – post processing
Waste #8	Cyanide strip solutions, on-site generated – post processing
Waste #9	Precious metal precipitate residues – post processing
Waste #10	Precious metal precipitant supernatant/washwater – post processing
Waste #11	Acid purification solution, post treatment – post processing
Waste #12	Neutralized acid solution, on-site generated – post processing
Waste	Other waste deemed to be treatable that is not listed in Section II, Tables.

C. TREATMENT DEVICE/EQUIPMENT DESCRIPTION

The Waste Treatment System (WTS) comprises of two upright 1300 gallon polyethylene cone tanks secured in welded steel stands that have been seismically anchored in place to a fifteen steel reinforced pad, a filter press, and ion exchange columns.

The cone tanks are used for pH adjustment, adding flocculent, and settling the precipitates. After adjusting the pH, the flocculent is added and allowed to settle out. The supernatant is pumped through the filter press and then the ion exchange system for polishing the treated effluent. The sludge/slurry at the bottom of the tank is then pumped through the filter press and the ion exchange in a like manner. The filter press collects the sludge and generates a filter cake material, which can then be shipped off-site for further treatment. The polished effluent is sent to the second cone tank for holding until it is decided to ship it off-site for disposal or permission is obtained to sewer it.

The Waste Treatment System is not used on a regular basis. Initially it was intended to assist with any overflow of materials, final treatment of solutions that have already had their valuable metals recovered, and for treating waste streams that have been determined to be unsuitable for the other equipment for any reason. These cone tanks also provide temporary and emergency storage of hazardous wastes if needed, until they can be shipped off-site or treated. The WTS is not generally used for this purpose.

(See Section II, Attachment 5, the Facility Map; Attachment 11, the Filter Press Specifications; Attachment 12, the Ion Exchange Units Specifications; and Attachment 14, Architectural and Engineering Drawings and Reports for details.)

1. Internal and/or external dimensions in feet and inches

   Internal dimensions = 91.5" (d) x 24" (h) plus cone Bottom

   External dimensions = 92" (d) x 24.25" (h) plus cone Bottom

2. Internal design capacity in gallons

   Capacity: 1, 477 gallons, with 1, 300 gallons operational capacity

3. Shell thickness such as wall, top, and bottom in inches

   Wall = 1/4" Top = Not applicable Bottom = ¼"

4. Age of each tank (new or from the operating records of the facility)

   WTS-1 = 10 years
   WTS-2 = 10 years

5. Operating temperature of each tank in degrees Fahrenheit (from design or from operating records) and operating pressure in psi

   Temperature: Ambient psi: Ambient

6. If the equipment will be coated or lined, describe the lining and/or coating material and thickness used inside or outside.

   Response: Not applicable. Not lined or coated.

D. SECONDARY CONTAINMENT DESIGN

The Waste Treatment System is located primarily in storage/treatment area S005, with the two cone tanks sharing the area with the filter press. The ion exchange resin columns have their own storage/treatment area in S003. The secondary containment system exceeds 150% of the largest container and 10% of the total aggregate volume. See Section II, Attachment 14, Architectural and Engineering Drawings and Reports. See Section IV, item C for a complete description of these storage areas.

Specifically see:

14.1 Freitas + Freitas Engineering and Planning Consultants, *"Tank System Assessments"*, November 24, 2010 (17 pages)

14.2 Robinson and Associates, *"J&B Enterprises, 1650 Russell Avenue, Santa Clara Design Certification of Hazardous Waste Treatment and Storage Facility"*, July 10, 2001 (25 pages)

14.3 Habitec Architectural & Planning, *"J&B Enterprises T.I., Phase IV – Hazmat"* Plans, January 12, 2001 (7 pages)

14.4 T Square Consulting Group, Inc., *"Structural Calculations for J&B Enterprises, 1650 Russell Ave., Santa Clara, CA"*, August 21, 2003 (26 pages)

14.5 Shad Engineers, *"Structural Calculations for J&B Enterprises, 342 Laurelwood Ave., Santa Clara, CA"*, August 21, 2003 (6 pages)

14.6 California Environmental Management Service Co., Inc., *"UBC Containment Calculations for Hazardous Materials and Sprinkler Water"*, March 3, 2001 rev. (5 pages)

E. TREATMENT OF IGNITABLE, CORROSIVE, OR REACTIVE HAZARDOUS WASTE

1. The facility does not handle ignitable hazardous wastes, and the only corrosives are those with a pH of 12 or greater (no acid corrosives are treated). All hazardous waste storage and treatment is conducted inside of building or in roofed enclosures and the storage areas are more than 50 feet distance from the property lines. See Section II, Attachment 5, the Facility Map and Attachment 14, Architectural and Engineering Drawings and Reports.

2. The Waste Treatment System is secured in a roofed enclosure by a fence, and is approximately 50' from the property boundary. Hazardous wastes are not normally stored in S005, the WTS area, or in S003, the Ion Exchange Column area. These two storage/treatment areas are primarily for emergency use.

a. The waste treated at this facility is not flammable, explosive, or prone to violent reactions. The wastes are segregated and no incompatible hazardous waste can accidentally mix and react. No acid corrosive wastes are accepted at the facility for storage, transfer, or treatment. There is a designated and physically isolated "acid" corrosive storage area in S003 for chemicals needed for resin regeneration and another small container stored in the Acid Wash/Fume Hood inside S002.

b. These wastes do not generate or produce uncontrolled flammable fumes, dusts, or gases in sufficient quantities to threaten human health and/or the environment.

c. These wastes do not produce uncontrolled flammable fumes or gases in sufficient quantity to pose a risk of fire or explosions.

d. These wastes do not damage the structural integrity of the container or the facility.

e. These wastes do not through other means threaten human health or the environment.

F. SPECIFIC AIR EMISSIONS

J&B Enterprises has air quality permits from the Bay Area Air Quality Management District (BAAQMD) for the following:

Plant Number: 12625
Crucible Furnace, Application number 1311 (Exempt)
Evaporator, Application number 1311
Concentrator Tanks, Application number 1655, (Exempt)
Two Strip Tanks, Application number 1311 (Exempt)
Purification Process – Water and Acid Washes, Application number 1311 (Exempt)
Reciprocating Engine, Cooled Gas Backup Engine Generator , Application number 5366
Waste Water Treatment System, Application number 1311 (Exempt)

The BAAQMD was contacted regarding RCRA Subparts AA, BB, CC compliance. J&B's assigned permit engineer, Ms. Thu Bui, informed us that the District did not have a RCRA Subparts AA, BB, CC compliance requirement. Consultation with Region IX EPA RCRA Inspector, Mr. Kaoru Morimoto, concurred with our review of the AA BB CC regulation that it does not apply to the wastes, equipment, or practices at J&B Enterprises. Air emission controls are not required for J&B storage tanks and containers.

G. ENGINEERS CERTIFICATIONS

Independent, qualified professional engineers registered in the State of California have prepared tank and secondary containment integrity certification. The certifications are in Section II, Attachment 14 Architectural and Engineering Drawings and Reports.

H. ENGINEERS QUALIFICATIONS

Same as G above. The engineers used to complete the certifications are registered professional engineers (PE's) in the State of California.

SECTION V – FACILITY DESIGN (TREATMENT) – CRUCIBLE FURNACE

A. Treatment Process Description and Flow Diagram

1. Treatment process: The Crucible Furnace is used to melt the gold reclaimed in the treatment processes (i.e. the gold "mud" from precipitation and the cathodes from electrowinning). This is typically done in batches up to 10 lbs. each.

a. Equipment used: Crucible furnace (F-1)

b. Chemicals added: Flux (Soda ash, lime, or sulfur as needed)

c. Process type (e.g., batch, continuous, etc.): Batch treatment

d. Feed rate (e.g., gal/min., lb/hr., etc.): Estimated 5 – 10 pds/batch

e. Chemical reactions, if any: None

Metal + metal compound ('mud") → Metal (gold) + slag

f. Products and by-products for each chemical treatment process: Sold gold metal ingots and glass slag

2. Flow Process Diagram: See Section II, Attachment 7, Process Flow Diagrams

a. The furnace with crucible is above ground.

b. The furnace cannot be entered due to its small size. But is easily inspected and repaired as necessary.

c. Aisle space: 5'

d. No automatic or manual feed waste safety cutoff system is required. There is an automatic gas cutoff switch for the gas supply line.

e. The furnace and crucible are not stored outdoor; they are stored in a dedicated room.

f. There is no bypass system to a standby tank or a backup plan to prevent overfills. This is not a tank and the requirement is not applicable.

g. There are no pressurized waste tanks or containers. There is a pressurized gas supply line to the furnace.

h. There are ultraviolet sensors that automatically shut-off the gas supply in the event that the pilot light goes out.

i. There are no liquid level indicators used in heated tanks since there are no liquid wastes processed in the furnace.

j. There are no tanks that contain the type of volatile hazardous wastes that would create pressure. In addition, the top of the furnace is open and well vented so that no pressure can build up.

k. There are no metal hazardous waste tanks outdoors.

3. Data that shows the effectiveness of the treatment:

a. Influent waste analysis. All data in units of mg/liter, unless noted.

Precious Metal Precipitate (Mud) – Waste # 9

Analyses	Range	Avg.[2]	Analyses	Range	Avg.
Water	100, 000-300, 000	165, 000	Cyanide	<1	<1
Antimony	1-800	37.5	Arsenic	<1-100	<2.5
Barium	<1-1, 000	36.5	Beryllium	<1-50	<1
Cadmium	1-300	16.5	Chrome (T)	1-100	4
Copper	500-10, 000	2, 950	Lead	100-10, 000	1, 010
Mercury	<0.1	<0.06	Nickel	30-30, 000	2, 542
Silver	10-1, 000	70	Thallium	<1-10	5
Zinc	10-50, 000	4, 163.5			

Data Summary - Approximate Concentration Ranges (all items are in units of % by weight)

Gold	68-98%[3]	Water	1-2%
Copper	2-35%	Nickel	<0.01-4%
Lead	<0.05-0.4%	Zinc	<0.01-1.6%
other metals[4]	0.01-3%		

Electrowinning Plates (non-hazardous cathodes)

Analyses	Range	Avg.[5]	Analyses	Range	Avg.
Gold	63 -98%	65%			
Antimony	.01-.1%	N/A	Arsenic	.01-.1%	N/A

2 This figure represents an average of samples collected and analyzed.

3 Gold concentration is a wet weight basis. Dry weight equivalent concentration range estimated at 90-97%.

4 This includes only those other metals that are regulated as characteristic hazardous wastes by the State of California.

5 The gold concentration on a dry weight basis is anticipated to be about 63-99%. The metals combined total is anticipated to make up the remainder.

Barium	.01-.1%	N/A	Beryllium	.01-.1%	N/A
Cadmium	.01-.1%	N/A	Chrome (T)	.01-.1%	N/A
Copper	.01-.1%	35%	Lead	.01-.1%	N/A
Mercury	.01-.1%	N/A	Nickel	.01-.1%	N/A
Silver	.01-.1%	<5%	Thallium	.01-.1%	N/A
Zinc	.01-.1%	N/A	Cyanide	.01-.1%	N/A

b. Effluent waste analysis. There is no effluent, only solid metal ingots and a glass slag.

Furnace Slag

Analyses	Range	Avg.	Analyses	Range	Avg.
Antimony	<1-100	35	Arsenic	<1-100	1
Barium	10-100	13	Beryllium	<1-10	1
Cadmium	<1-50	1	Chrome (T)	<1-200	38.5
Copper	20-2, 000	143	Lead	5-200	33
Mercury	ND	ND	Molybdenum	<1-20	1.5
Nickel	20-2, 000	236	Selenium	<1-100	5
Silver	1-100	10.5	Thallium	<1-50	3
Zinc	100-10, 000	2, 420	Cobalt	5-500	26

Gold Ingots

Analyses	Range	Average	Analyses	Range	Average
Copper	1, 000-10, 000	3, 670	Lead	200-7, 000	1, 455
Nickel	50-5, 000	375	Zinc	10-10, 000	1, 915

4. Information concerning prevention of releases into the environment:

a. All hazardous waste activities are conducted indoors on hard, impermeable surfaces with or in secondary containment. This will prevent any releases of hazardous waste from reaching surface soils, surface water or wetlands.

b. The liquid wastes being reclaimed at the facility are water based with the pH carefully controlled and monitored so that there would be no releases of hazardous waste into the air.

B. HAZARDOUS WASTES TREATED

1. See Section III, the Waste Analyses Plan, Tables 2, 3, and 4 which contain the specifics on each waste stream. This information includes all of the following:

a. Common waste chemical name(s)
b. EPA and/or California hazardous waste number(s)
c. Specific gravity
d. Vapor pressure, if applicable
e. Flame point/auto-ignition temperature, if applicable
f. pH
g. Color

The waste streams are the gold and precious metal bearing wastes from the precious metal precipitation process in the Acid Wash/Fume Hood (i.e. the mud) and the cathodes from the electrowinning units.

Waste #9	Precious metal precipitate (mud)
Non-waste	EW cathodes (not a hazardous waste)

C. TREATMENT DEVICE/EQUIPMENT DESCRIPTION

Devices or equipment used in each storage or treatment area: The furnace room with the crucible furnace. The material treated in the crucible furnace is the gold recovered from electrowinning and from the precious metal precipitation process, the plated cathodes and the mud, respectively. This is not considered a treatment or storage area as such, but the processing area for the end product.

1. Internal and/or external dimensions in feet and inches

   Internal dimensions = 14" (d) x 17" (h)
   External dimensions = 23.5" (d) x 24" (h) plus 2" ring stand

2. Internal design capacity in gallons

   Total crucible capacity is approximately 1.2 gallons (10 - 15 Lbs.)

3. Shell thickness such as wall, top, and bottom in inches

   Wall = 5" total, includes 3/32" steel + cement + fire brick
   Top/Lid = 3.5" total, includes 3/32" steel + cement + fire brick
   Bottom = 7", includes 3/32" steel + cement

4. Age of each tank (new or from the operating records of the facility)

   Not applicable, this is not a tank. The furnace is approximately 34 years.

5. Operating temperature of each tank in degrees Fahrenheit (from design or from operating records) and operating pressure in psi

   Temperature = 2,000 - 2, 500 °F

6. If the equipment will be coated or lined, describe the lining and/or coating material and thickness used inside or outside.

   Not applicable. This is not a tank. The furnace is lined with firebrick, which is periodically replaced for maintenance. The silicon carbide crucibles are disposable, usually lasting 20 – 40 melts.

D. SECONDARY CONTAINMENT DESIGN

There is no secondary containment structure as such. The floor is a concrete and the 'mud' and the cathodes are solid materials and not hazardous. Should any of the valuable product be spilled onto the floor, it would be easily and immediately picked up. The crucible furnace is seismically anchored.

E. TREATMENT OF IGNITABLE, CORROSIVE, OR REACTIVE HAZARDOUS WASTE

1. The facility does not handle ignitable hazardous wastes, and the only corrosives are those with a pH of 12 or greater (no acid corrosives are treated). All hazardous waste storage and treatment is conducted inside the building or in roofed enclosures and the storage areas are more than 50 feet distance from the property lines. See Section II, Attachment 5, the Facility Map and Section II, Attachment 14 Architectural and Engineering Drawings and Reports.

2. The crucible furnace is located in the furnace room, an area dedicated to this piece of equipment. This equipment does not require any special separation because the room is isolated and no hazardous wastes are stored here.

a. The waste treated at this facility is not flammable, explosive, or prone to violent reactions.

b. These wastes do not generate or produce uncontrolled flammable fumes, dusts, or gases in sufficient quantities to threaten human health and/or the environment.

c. These wastes do not produce uncontrolled flammable fumes or gases in sufficient quantity to pose a risk of fire or explosions.

d. These wastes do not damage the structural integrity of the container or the facility.

e. These wastes do not through other means threaten human health and/or the environment.

F. SPECIFIC AIR EMISSIONS

J&B Enterprises has air quality permits from the Bay Area Air Quality Management District (BAAQMD) for the following:

Plant Number: 12625
Crucible Furnace, Application number 1311(Exempt)
Evaporator, Application number 1311
Concentrator Tanks, Application number 1655, (Exempt)
Two Strip Tanks, Application number 1311 (Exempt)
Purification Process – Water and Acid Washes, Application number 1311 (Exempt)
Reciprocating Engine, Cooled Gas Backup Engine Generator , Application number 5366
Waste Water Treatment System, Application number 1311 (Exempt)

The BAAQMD was contacted regarding RCRA Subparts AA, BB, CC compliance. J&B's assigned permit engineer, Ms. Thu Bui, informed us that the District did not have a RCRA Subparts AA, BB, CC compliance requirement. Consultation with Region IX EPA RCRA Inspector, Mr. Kaoru Morimoto, concurred with our review of the AA BB CC regulation that it does not apply to the wastes, equipment, or practices at J&B Enterprises. Air emission controls are not required for J&B storage tanks and containers.

G. ENGINEERS CERTIFICATIONS

Independent, qualified professional engineers, registered in the State of California have prepared tank and secondary containment integrity certification. The certifications are in Section II, Attachment 14 Architectural and Engineering Drawings and Reports. Specifically see:

14.1 Freitas + Freitas Engineering and Planning Consultants, *"Tank System Assessments"*, November 24, 2010

14.2 Robinson and Associates, *"J&B Enterprises, 1650 Russell Avenue, Santa Clara Design Certification of Hazardous Waste Treatment and Storage Facility"*, July 10, 2001

H. ENGINEERS QUALIFICATIONS

Same as G above. The engineers used to complete the certifications are registered professional engineers (PE's) in the State of Californi

SECTION V – FACILITY DESIGN (TREATMENT) - EVAPORATOR

A. Treatment Process Description and Flow Diagram

1. Treatment process: The evaporator is used to volumetrically reduce and solidify the treated precious metal solutions to a thick sludge or a solid cake, for disposal. Once treated, this waste stream may be consolidated, or have mixed in with it, other solid waste such as filters, resins, gloves, wipes, and other debris, The evaporator solids are then sent for further reclamation at an offsite facility.

a. Equipment used: Evaporator (E-1)

b. Chemicals added: None

c. Process type (e.g., batch, continuous, etc.): Batch treatment with topping off

d. Feed rate (e.g., gal/min., lb/hr., etc.): Estimated 10 to 195 gallons per batch or top-off

e. Chemical reactions, if any: None

f. Products and by-products for each chemical treatment process: Evaporator sludge or cake

2. Flow Process Diagram: See Section II, Attachment 7, Process Flow Diagrams

a. All tanks are above ground.

b. Tanks can be entered for inspection or repair as necessary. However, all of the tanks are small enough that they can be inspection from above.

c. Aisle space: 5'

d. No automatic or manual feed waste safety cutoff system are required, all containers and tanks are emptied and filled using portable pumps with an operator in attendance.

e. No tanks are stored outdoors without a roof and secondary containment.

f. There is no bypass system to a standby tank or a backup plan to prevent overfills. All tanks are manually managed using portable pumps and are located in secondary containment designed to catch and contain any accidental releases.

g. There are no pressurized waste tanks or containers.

h. Heated tanks have manually operated thermostats and high temperature sensors in the exhaust stacks that automatically shut off the burner if the temperature gets too high.

There are ultraviolet sensors that automatically shut-off the gas supply in the event that the pilot light goes out.

i. There are no liquid level indicators used in heated tanks since the purpose of the tank is to remove water, reduce volume, and dry the waste as much as possible.

j. There are no tanks that contain the type of volatile hazardous wastes that would create pressure. In addition, the tanks are open and well vented so that no pressure can build up.

k. There are no metal hazardous waste tanks outdoors.

3. Data that shows the effectiveness of the treatment:

a. Influent waste analysis. All data in units of mg/liter, unless noted.

Analyses	Waste #10	Waste #12
pH	9-14	9-12
Cyanide (T)	1, 000-50, 000	<1
Antimony	<1-100	<1-100
Arsenic	<1-1, 000	<1-1, 000
Beryllium	<1-50	<1-50
Cadmium	<1-500	<1-500
Copper	100-10, 000	<1-20, 000
Lead	<1-4, 000	<1-6, 000
Nickel	50-10, 000	<1-1, 000
Silver	<1-1, 000	<1-1, 000
Thallium	<1-100	<1-100
Zinc	5-50, 000	5-100, 000

b. Effluent waste analysis. All data is in units of mg/kg and represents total metals data TTLC). In addition to the evaporator solids waste described below, the evaporator may be used to concentrate the above listed liquid wastes prior to transferring the concentrated solutions to other equipment, such as the Wastewater Treatment System (WTS) for further processing.

Analyses	Waste #20
pH	9-13
Cyanide (T)	1, 000-100, 000
Antimony	<1-250
Arsenic	<1-500
Barium	<1-500
Beryllium	<1-50
Cadmium	<1-200
Chromium	<1-300

Cobalt	5-1, 000
Copper	500-20, 000
Lead	50-5, 000
Mercury	<0.1
Molybdenum	<1-100
Nickel	100-10, 000
Selenium	<1 - 1, 000
Silver	<1-500
Thallium	<1-100
Vanadium	<1-100
Zinc	1, 000-100, 000

4. Information concerning prevention of releases into the environment: .

a. All hazardous waste activities are conducted indoors on hard, impermeable surfaces with or in secondary containment. This will prevent any releases of hazardous waste from reaching surface soils, surface water or wetlands.

b. The liquid wastes being reclaimed at the facility are water based with the pH carefully controlled and monitored so that there would be no releases of hazardous waste into the air.

B. HAZARDOUS WASTES TREATED

1. See Section III, the Waste Analyses Plan, Tables 2, 3, and 4which contain the specifics on each waste stream. That information includes all of the following:

a. Common waste chemical name(s)
b. EPA and/or California hazardous waste number(s)
c. Specific gravity
d. Vapor pressure, if applicable
e. Flame point/auto-ignition temperature, if applicable
f. pH
g. Color

These waste streams are primarily the treated wastes from the Concentrators, Evaporator, and Precipitation processes, which are treated in the Evaporator. The following wastes correspond with the Section III Tables. There may occasionally be other similar or like wastes that can be safely and compatibly treated in these tanks that may not be listed here.

Waste #1	Aqueous solutions with Cyanide and precious metals
Waste #2	Non-reactive dragout solutions w/precious metals
Waste #3	Non-cyanide precious metal solutions, non-acidic
Waste #4	Iodine Etch solutions

Waste #5	Residue containing precious metals
Waste #7	Photographic/Silver Solutions
Waste #8	Cyanide strip solutions, on-site generated
Waste #9	Precious metal precipitate residues
Waste #10	Precious metal precipitant supernatant/washwater
Waste #11	Acid purification solution, post treatment
Waste #12	Neutralized acid solution, on-site generated

C. TREATMENT DEVICE/EQUIPMENT DESCRIPTION

The Evaporator is an upright vertical steel tank enclosed in a steel cabinet that is exhausted through the roof. The tank has a steel insert (a liner) in which solutions are placed and heated to reduce them to a thick sludge or solid cake. The tank is heated by gas and is equipped with controls and a shutoff device. Once the wastes placed in it have been treated, the tank is emptied and the contents sent offsite for additional reclamation. The physical characteristics of the tanks are as follows.

1. Internal dimensions = Square tank with sloping walls; upper dimensions of 3', lower dimensions of 2', and a height of 5'

   External dimensions = 4' x 4' x 80" (h)

2. Internal design capacity in gallons

   243 gallons capacity, with 195 gallon operational capacity

3. Shell thickness such as wall, top, and bottom in inches

   Wall = 1/4" Top = Not applicable Bottom = 1/4'

4. Age of each tank (new or from the operating records of the facility)

   E-1 = 26 years old

5. Operating temperature of each tank in degrees Fahrenheit (from design or from operating records) and operating pressure in psi

   Temperature: Ambient up to 200 - 400 °F

6. If the equipment will be coated or lined, describe the lining and/or coating material and thickness used inside or outside.

   Response: a 1/8" mild-steel disposable liner is used. These liners may last 3 – 5 years, depending on the amount of use.

D. SECONDARY CONTAINMENT DESIGN

The Evaporator is located in S002, the Gold Processing Room that is a storage and waste processing area , which has secondary containment. The secondary containment system exceeds 150% of the largest container and 10% of the total aggregate volume. See Section II, Attachment 14:

14.1 Freitas + Freitas Engineering and Planning Consultants, *"Tank System Assessments"*, November 24, 2010 (17 pages)

14.2 Robinson and Associates, *"J&B Enterprises, 1650 Russell Avenue, Santa Clara Design Certification of Hazardous Waste Treatment and Storage Facility"*, July 10, 2001 (25 pages)

14.3 Habitec Architectural & Planning, *"J&B Enterprises T.I., Phase IV – Hazmat"* Plans, January 12, 2001 (7 pages)

14.4 T Square Consulting Group, Inc., *"Structural Calculations for J&B Enterprises, 1650 Russell Ave., Santa Clara, CA"*, August 21, 2003 (26 pages)

14.5 Shad Engineers, *"Structural Calculations for J&B Enterprises, 342 Laurelwood Ave., Santa Clara, CA"*, August 21, 2003 (6 pages)

14.6 California Environmental Management Service Co., Inc., *"UBC Containment Calculations for Hazardous Materials and Sprinkler Water"*, March 3, 2001 rev. (5 pages)

14.7 Tera Lite Inc., *"Tera-Gem III Troweled Chemical Resistance Floor System (CRS)"*, July 31, 2000 (22 pages)

E. TREATMENT OF IGNITABLE, CORROSIVE, OR REACTIVE HAZARDOUS WASTE

1. The facility does not handle ignitable hazardous wastes, and the only corrosives are those with a pH of 12 or greater (no acid corrosives are treated). All hazardous waste storage and treatment is conducted inside the building or in roofed enclosures and the storage areas are more than 50 feet distance from the property lines. See Section II, Attachment 5, the Facility Map and Section II, Attachment 14, Architectural and Engineering Drawings and Reports.

2. The Evaporator tank is located in S002, the Precious Metal Recovery Room which is a designed H2 Hazardous Occupancy with 1-hour fire resistant walls, and 2-hour fire resistant doors, emergency lighting and ventilation, general room exhaust (minimum 6 air changes per hour) and a backup generator that automatically operates if there is any power loss.

a. The waste treated at this facility is not flammable, explosive, or prone to violent reactions. The wastes are segregated and no incompatible hazardous waste can accidentally mix and react. No acid corrosive wastes are accepted at the facility for storage, transfer, or treatment. There is a designated and physically isolated "acid" corrosive storage areas in S003 for chemicals needed for resin regeneration and another small container stored in the Acid Wash/Fume Hood inside of S002.

b. These wastes do not generate or produce uncontrolled flammable fumes, dusts, or gases in sufficient quantities to threaten human health and/or the environment.

c. These wastes do not produce uncontrolled flammable fumes or gases in sufficient quantity to pose a risk of fire or explosions.

d. These wastes do not damage the structural integrity of the container or the facility.

e. These wastes do not, through any other means, threaten human health and/or the environment.

F. SPECIFIC AIR EMISSIONS

J&B Enterprises has air quality permits from the Bay Area Air Quality Management District (BAAQMD) for the following:

Plant Number: 12625
Crucible Furnace, Application number 1311(Exempt)
Evaporator, Application number 1311
Concentrator Tanks, Application number 1655, (Exempt)
Two Strip Tanks, Application number 1311 (Exempt)
Purification Process – Water and Acid Washes, Application number 1311 (Exempt)
Reciprocating Engine, Cooled Gas Backup Engine Generator , Application number 5366
Waste Water Treatment System, Application number 1311 (Exempt)

Note: The BAAQMD was contacted regarding RCRA Subparts AA, BB, CC compliance. J&B's assigned permit engineer, Ms. Thu Bui, informed us that the District did not have a RCRA Subparts AA, BB, CC compliance requirement. A review of the AA BB CC regulation indicates that it does not apply to the equipment and practices at J&B Enterprises. Air emission controls are not required for J&B tanks and containers.

G. ENGINEERS CERTIFICATIONS

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H. ENGINEERS QUALIFICATIONS

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7/13/11 8am

STANDARDIZED PERMIT APPLICATION

SECTION VI – TRAINING

For

J&B ENTERPRISES
CAD982052797

July 2011

SECTION VI

TRAINING PLAN

SECTION VI – TRAINING PROGRAM

EMPLOYEE INFORMATION AND TRAINING

The Training Plan is designed to give employees an initial 24-hHour HazWoper Site Operation Training for Hazardous Waste Operations per 29 CFR 1910 (Introductory Training) and a subsequent 8-Hour Annual HazWoper refresher training (Ongoing Training).

24-Hour HazWoper Site Operations training and 8-Hour Annual Haz-Woper refresher training requirements include the following topics:

- Hazard Communication Training
- Contingency and Emergency Plans
- RCRA Training – Hazardous Waste Management
- Procedures for Processes Used
- Waste Analysis Plan
- Medical Monitoring
- Driver Training
- And other specialized training

The specifics of this training can be found in the *"Written Training Program for J&B Enterprises"* April 2011 version. See the attached copy of this program. This program meets the requirements of Title 22 CCR 66264.16 and Title 8 CCR 5192.

Attached

"Written Training Program for J&B Enterprises", April 2011 (77 pages)

WRITTEN TRAINING PROGRAM

J & B Enterprises

1650 Russell Avenue
Santa Clara, CA 95054

408.988.7900

March 2011

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July 18, 2009

INTRODUCTION

J & B Enterprises has developed a training program to enhance our employees' health and safety, and to familiarize employees with OSHA, RCRA, DOT and other regulatory requirements. This is accomplished by providing written plans, procedures, and conducting training to ensure that there is adequate safe working conditions at the facility.

As a company we intend to provide information about the physical and chemical hazards of the hazardous wastes at the facility and other hazardous substances used, and the control of these hazards via the Written Training Program. The Program includes our Hazard Communication Program, and covers, among other things, container labeling, Material Safety Data Sheets (MSDS) and other specific training needs, such as shipping, handling, and treatment of hazardous wastes.

The following program is how we will accomplish this objective. If anyone has questions about this plan, please contact Ken Epsman.

Signed

Ken Epsman
Owner/Operator

PART 1: SECTIONS 1 - 12

1.1 EMPLOYEE INFORMATION AND TRAINING

The Training Plan is designed to give you an initial 24 Hour HazWoper Site Operation Trainings for RCRA TSD Operations and Emergency Responders, as per 29 CFR 1910 and subsequent 8 Hour Annual HazWoper refresher training in the following subjects:

* 24 Hour HazWoper Site Operations Training and 8 Hour Annual Haz-Woper refresher-training requirements
* Hazard Communication Training
* Contingency and Emergency Plans
* RCRA Training
* Procedures for Processes Used
* Waste Analysis Plan
* Medical Monitoring
* Driver Training and other specialized training

The formal training requirements vary by job type and are detailed in this section of the Training Manual. Every hazardous waste handling employee at J & B Enterprises will receive an initial 24 Hours of Initial Training for Hazardous Waste Workers (HazWoper) required for RCRA TSD Operations; and Emergency Responders, as per 29 CFR 1910. In addition, an 8 Hours of annual training will include a review and discussion of the J&B Enterprises Training Manual. This training may be completed in house or by a qualified vendors providing training as per 29 CFR 1910.

Part 1, the Hazard Communication portion of this program is incorporated over several sections of this document and is designed to provide you with training on the following:

* An overview of the requirements contained in the Hazard Communication Regulation, including their rights under the regulation
* Inform employees of any operations in their work area where hazardous substances and hazardous waste are present
* Location and availability of the written hazard communication program
* Physical and health effects of the hazardous substances
* Methods and observation techniques used to determine the presence or release of hazardous substances in the work area
* How to lessen or prevent exposure to these hazardous substances through usage of control, work practices and personal protective equipment
* Steps the company has taken to lessen or prevent exposure to these substances
* Emergency and first aid procedures to follow if employees are exposed to hazardous substance(s)
* How to read labels and review MSDS to obtain appropriate hazard information
* Hazardous waste treatment regulations and Process Procedures training

NOTE: It is critically important that all of our employees understand the training. If you have any additional questions, please contact Ken Epsman.

Part 2, addresses Hazardous Waste Generator and Facility training and is job specific training for hazardous waste operators,

* Emergency and spill response procedures
* The shipping, receiving, storing, and treating of hazardous waste
* RCRA and California Hazardous Wastes
* Waste analyses and identification
* Processes used at the facility for management and treatment of hazardous wastes
* Forklift and driver training
* A review of basic Toxicology and Hygiene
* Training records

Personnel Training (22 CCR 66265.16)

Facility personnel must complete a training program (on the job and/or classroom) that is relevant to their position and that at a minimum teaches them to effectively respond to emergency situations by review of emergency procedures, equipment, and systems, including where applicable:

1. Procedures for using, repairing, inspecting, and replacing emergency and monitoring equipment.

2. Key parameters for automatic waste feed cut-off systems - not applicable to J&B Enterprises at this time, as there are no automatic waste feed systems.

3. Operation of communications and alarm systems

4. Response procedures for fires and explosions

5. Response procedures for groundwater contamination incidents

6. Shutdown procedures

These training sessions must be conducted by someone who has been trained in hazardous waste management procures.

Employees must complete training within 6 months of hiring, or reassignment to a new position, and may not work unsupervised until such training has been completed. An annual review of training is also required for all employees.

J&B Enterprises maintains the records listed below at the facility. All records will be retained until closure of the facility for current personnel, or for three years after termination of employment for former employees.

1. Job title for each position that is involved in the handling of hazardous wastes, and an identification of which employee is filling each position.

2. Written job description, including required skills and qualifications; as well as job duties.

3. Written description of the introductory and annual safety training requirements for each position.

4. Records that document that all of the required training has been completed.

Safety and Health Protection on the Job

All employees are entitled to basic safety and health protection on the job. State and Federal Law guarantee this. It is the employer's responsibility to provide information, safety training, and personal protective equipment to employees sufficient for the employee to perform their tasks in a safe and healthy manner. It is the employee's responsibility to follow safety procedures, observe safety rules, and use personal protective equipment provided. In addition, it is every individual's responsibility to prevent accidents, report unsafe conditions or work practices, and to participate actively in helping to create as safe a work environment as possible.

Access to Medical Records

All employees are entitled to any and all job related medical records. These will be released to the employee at their request. These records will be kept for the duration of the individual employment at J&B Enterprises. Should employees appear to have any job related illness, it is the policy of this company to encourage the employee to immediately report it and get a medical evaluation.

Organization Chart (as of May 2009)

The following organization table explains who is filling operational position(s) at J & B Enterprises:

Owner/Operator
Ken Epsman

Supervisor
Jim Sheehan

Precious Metals Reclamation Operator
Tom Stillson and Jim Hague

Warehouse/Yard Personnel

Jim Hague and Ed Godbout

Drivers
Jim Hague and Ed Godbout

Chemical Strip Operator
Paul Villegas

Office Manager
Barb Clark

Emergency Coordinators
Jim Sheehan, Primary
Tom Stillson, Secondary (or Alternate)
Barbara Clark, Secondary (or Alternate)
Jim Hague, Secondary (or Alternate)
Ken Epsman, Secondary (or Alternate)

Consultant (not an employee)
John Schultz

1.2 JOB TITLES, DESCRIPTION, AND TRAINING

The following positions are required to operate the facility. Some personnel may fill more than one job title, as indicated in the Organization Table.

In addition to the descriptions for the individual positions all employees must be made aware that in any position at J & B Enterprises the employee faces possible exposure to hazardous materials, including extremely toxic cyanides.

The hazardous materials to which employees of J & B Enterprises may be exposed are cyanides, iodine etch solution, sodium salt of m-Nitrobenzene sulfonic acid, nitric acid, zinc dust, caustic soda, sulfur dioxide, acetylene, oxygen, Propane, and sodium hydrosulfite. For the specific hazards of these chemicals please read the information given in the material safety data sheets (MSDS) for each chemical. The MSDS's are located in the Conference room and are available for review at any time.

In order to prevent chemical exposure to its employees, J & B Enterprises requires all employees to complete this entire written training program or an equivalent training program. No employee will work without supervision on tasks involving hazardous materials or hazardous wastes until the written training program has been completed and the supervisor has observed the employee perform the specific task and has judged the employee to be competent at that task.

A copy of the job description and this supplemental sheet will be available for the employee to review in this document. If the job changes or the employee changes jobs within the company, the job description will be updated accordingly.

Owner/Operator

Job Qualifications:
The Owner/Operator must have sufficient knowledge to implement all of the applicable regulations pertaining to the treatment, storage, and transportation of hazardous materials and wastes. In addition, the Owner/Operator must have sufficient knowledge to implement an occupational safety and health program, as required by OSHA and Cal-OSHA regulations.

Job Description:
The Owner/Operator is responsible for:

1. Obtaining all environmental, safety, and other business permits
2. Keeping all permits and required safety and environmental documentation current
3. Implementing the health and safety training program for:
   a. On-the-job training
   b. Formal classroom training
4. Overall responsibility for all operations involving hazardous materials and wastes
5. Familiarity with the hazards of cyanide containing materials, and the authorized emergency response procedures, as described for working with Cyanide
6. Interfacing with regulatory agencies and their representatives

The Owner/Operator can delegate any or all the above responsibilities to another employee or representative of the company, but will have final responsibility for all of their actions.

Specific Duties:
1. Permits (all), procurement and maintenance
2. Obtaining, reviewing, and keeping available current Material Safety Data Sheets
3. Ensuring that all drums, tanks, and other containers of hazardous materials and wastes are properly labeled
4. Ensuring that employees performing non-routine tasks have been trained in the specific hazards and safety precautions of their job
5. Periodic review, and responsibility for amendment, of the facility Operation Plan and Emergency Response Plan
6. Responsibility for ensuring that employees follow all procedures for handling, use, and storage of hazardous materials and wastes, and that they use the required safety equipment

Training Requirements:
The Owner/Operator will receive training in all sections of the Training Plan.

Supervisor

Job Qualifications:
High school graduation plus five years experience in the field. Prior supervisory experience is desirable. Must be able to speak and read English, have good organizational abilities, be able to delegate assignments, and effectively supervise personnel. The Supervisor must be knowledgeable, and able, to implement applicable regulations pertaining to the treatment, storage, and transportation of hazardous materials and wastes.

Job Description:
The Supervisor is responsible for:
1. Familiarity with all plant operations, particularly in reference to hazardous waste reclamation activities and emergency response procedures
2. Familiarity with the hazards of cyanide containing materials, and the authorized emergency response procedures, as described in Section 9, Working With Cyanide
3. Interfacing with regulatory agencies and their representatives

Specific Duties:
1. Ensuring that incoming hazardous wastes are legally acceptable and approved hazardous wastes before accepting them.
2. Reviewing UHWM's for completion and accuracy, with follow-up in the event of a problem
3. Conducting field tests of hazardous wastes received at the facility, or during processing, as needed
4. Ensuring that employees follow all procedures for handling, use, and storage of hazardous materials and wastes; including the use of all required safety equipment
5. Overseeing the completion of reports regarding industrial accidents and environmental releases for regulatory agencies including Industrial Relations and DTSC

Training Requirements:
The Supervisor will receive training in all sections of the Training Plan.

Emergency Coordinator

Job Qualifications:
High school graduation plus two or more years experience at J & B Enterprises, or a similar facility. Must be able to speak and read English, have good organizational abilities, be able to delegate assignments, and effectively supervise personnel. The Emergency Coordinator must be familiar with all of J & B Enterprises operations, and have sufficient knowledge and authority to implement the Emergency Response and Contingency Plan.

Job Description:
The Emergency Coordinator is responsible for:

1. Familiarity with the hazardous and extremely hazardous wastes at the facility; including toxicity potential, safety precautions, and emergency procedures. This includes a familiarity with the hazards of cyanide containing materials, and the authorized emergency response procedures, as described in Section 9, Working With Cyanide.
2. Familiarity with the facility operations, equipment, and Emergency Response Plan; including the Emergency Coordinator's duties and responsibilities, as described therein
3. Completing the safety training program for:
   a. On-the-job training
   b. Formal in-class training
   c. Annual review of the Emergency Response Plan
4. The Emergency Coordinator must have sufficient authority to call in outside contractors and government agencies, as necessary in an emergency.

Specific Duties:
Please refer to the Emergency Response and Contingency Plan for specific details and responsibilities; including the Emergency Coordinator's reporting requirements.

The Emergency Coordinator may not delegate any of the above responsibilities to any employees, but may direct employees in the event of an emergency.

Training Requirements:
The Emergency Coordinator will receive training in all sections of the Training Plan.

Truck Driver

Job Qualifications:
Must be a high school graduate and have a Class B Driver's License, with good driving record. Must be responsible, display good common sense, and able to relate well to customers and others. The truck driver must be physically able to perform the work; able to understand and implement regulatory requirements regarding hazardous materials and wastes; read and write English; and able to understand and accurately complete Uniform Hazardous Waste Manifests (UHWM's) and other shipping papers as required.

Job Description:
The Truck Driver is responsible for:
1. Reviewing waste containers and shipping papers prior to acceptance, and for rejecting improper materials
2. Ensuring that the vehicle is maintained in the proper condition
3. Completing satisfactorily the safety training program for:
   a. On-the-job training
   b. Formal training
4. Supplying customers with empty containers for use in storing materials
5. Familiarity with the regulations and procedures for the transportation of hazardous materials and wastes; including spill notification and emergency procedures
6. Familiarity with the hazards of cyanide containing materials, and the authorized emergency response procedures, as described in Section 9, Working With Cyanide

Specific Duties:
1. Inspection of UHWM's, containers, and labels prior to acceptance, as described in Section 14, Driver Training, and signing the UHWM after shipment acceptance
2. Conducting field-tests, when necessary, to verify waste contents, as described in the Waste Analysis Plan
3. Loading the waste containers in the approved manner and securing the load, as described in Section 14, Driver Training
4. Prompt reporting of any spills or leaks, and immediate initiation of emergency response procedures
5. Performing periodic vehicle safety and maintenance inspections, and reporting any problems noted to the Supervisor or Owner/Operator

Training Requirements:
The Truck Driver will receive training in all sections of the Training Plan and Forklift and DOT Training every 3 years.

Precious Metal Reclamation Operator

Job Qualifications:
Must read and write English, be responsible, display good common sense, be able to work with minimal supervision, and be safety conscious. The Precious Metal Reclamation Operator must be physically able to do the work, able to understand and implement regulatory requirements regarding hazardous materials and wastes and safety procedures, and be able to operate the equipment used in processing.

Job Description:
The Precious Metal Reclamation Operator is responsible for:
1. Knowledge of the proper handling and processing procedures for the precious metal stripping and reclamation operations, as outlined in Section 15
2. Completing satisfactorily the safety training program for:
   a. On-the-job training
   b. Formal training
3. Familiarity with the Material Safety Data Sheets (MSDS) and toxic properties of all materials in use in this area
4. Familiarity with the hazards of cyanide containing materials, and the authorized emergency response procedures, as described in Section 9, Working With Cyanide
5. Familiarity with the spill notification and emergency response procedures, as outlined in the Emergency Response and Contingency Plan

Specific Duties:
1. Familiarity with facility emergency evacuation procedures, as outlined in the Emergency Response and Contingency Plan
2. Maintenance of all processing equipment, and emergency response equipment in the strip area; including the cyanide gas monitor, with notification of the Supervisor or Owner/Operator in the event of a problem.
3. Ensuring that all hazardous materials and wastes in the stripping room are properly stored and labeled, and that containers are sealed as required
4. Conducting periodic workplace and container inspections, as described in the Operation Plan
5. Conducting waste sampling and field tests as necessary to monitor stripping and recovery operations

Training Requirements:
The Precious Metal Reclamation Operator will receive training in all sections of the Training Plan, except for DOT and Driver Training, and will receive Forklift Safety Training every 3 years.

Warehouse

Job Qualifications:
Must read and write English, be responsible, display good common sense, be able to work with minimal supervision, and be safety conscious. The Warehouse personnel must be physically able to do the work, be able to understand and comply with regulatory requirements regarding hazardous materials and wastes, and be able to operate drum-handling equipment.

Job Description:
The Warehouse personnel are responsible for:

1. Prompt processing of all incoming hazardous materials and wastes
2. Knowledge of the proper storage locations and handling procedures for all of the hazardous materials and wastes received at the facility
3. Completing satisfactorily the safety training program for:
   a. On-the-job training
   b. Formal training
4. Familiarity with the Material Safety Data Sheets (MSDS) and toxic properties of all materials in use in this area
5. Familiarity with the hazards of cyanide containing materials, and the authorized emergency response procedures, as described in Section 9, Working With Cyanide
6. Familiarity with the spill notification and emergency response procedures, as outlined in the Emergency Response and Contingency Plan

Specific Duties:

1. Prompt processing of incoming hazardous wastes, as described in Section 16, Waste Analysis Plan, with all incoming wastes noted in the Operating Log as required before being transferred to the designated storage location
2. Conducting field tests as necessary to verify waste contents prior to acceptance, as described in Section 16, Waste Analysis Plan
3. Ensuring that all hazardous materials and wastes in the Receiving and Storage rooms are properly stored and labeled, and that containers are sealed as required

Training Requirements:
The Warehouse personnel will receive training in all sections of the Training Plan, except for DOT and Driver Training, and will receive Forklift Safety Training every 3 years.

Chemical Strip Operator

Job Qualifications:
The Chemical Strip Operator must understand English, be able to understand the specific hazardous of the job, including working with cyanide materials, be responsible, display good common sense, and be safety conscious. The Chemical Strip Operator must be physically able to do the work, and follow the authorized safe work and emergency procedures.

Job Description:
The Chemical Strip Operator is responsible for:
1. Knowledge of the proper handling and processing procedures for the precious metal stripping operation
2. Completing satisfactorily the safety training program for:
   a. On-the-job training
   b. Formal training
3. Familiarity with the Material Safety Data Sheets (MSDS) and toxic properties of the materials in use in this area - primarily sodium cyanide
4. Familiarity with the hazards of cyanide containing materials, and the authorized emergency response procedures, as described in Section 9, Working With Cyanide
5. Familiarity with the Emergency Coordinator notification requirements and emergency evacuation procedures, as outlined in the Emergency Response and Contingency Plan

Specific Duties:
1. Familiarity with facility emergency evacuation procedures, as outlined in the Emergency Response and Contingency Plan
2. Conduct strip operations and field tests as necessary to monitor stripping progress and solution quality
3. Notification of the Supervisor or Emergency Coordinator in the event of a processing or other serious problem
4. Ensuring that all hazardous materials and wastes in the strip room are properly stored and labeled, and that containers are sealed as required

Training requirements:
The Chemical Strip Operator will receive training in the following sections of the Training Plan:
1. Hazard Communication training (Sections 1-8, 12, and 19)
2. Emergency Response Plan (Section 17)
3. Job Specific Safety Training - Working with Cyanide (Section 9), Accident Prevention (Section 10), and Use of Personnel Protective Equipment (Section 11)
4. Forklift Safety Training every 3 years

Office Manager

Job Qualifications:
High school graduation or equivalent experience, general secretarial and typing skills, accuracy and ability to work with numbers, and four years of experience

Job Description:
The Office Manager is responsible for:
1. The performance of general office duties; including typing, filing, reception, and answering telephone.
2. The maintenance of all environmental and occupational health and safety related files
3. Assistance with hazardous waste pick-up co-ordination and paperwork; including the Uniform Hazardous Waste Manifests (UHWM)

Specific Duties:
1. Scheduling hazardous waste pick-ups
2. Assisting clients in the proper completion of the UHWM and hazardous waste labels
3. Review of incoming UHWM's to ensure completion, with follow-up for any problems noted
4. Maintenance of the facility UHWM files, and distribution of UHWM copies as appropriate

Training Requirements:
The Office Manager will receive training in the following sections of the Training Plan:
1. Hazard Communication training (Sections 1-8, 12, and 19)
2. Emergency Response Plan (Section 17)
3. Driver Training (Section 14 "Shipping Hazardous Waste" and "How to Complete a Hazardous Waste Manifest")
4. RCRA/California Hazardous waste Regulations (Section 13)
5. Waste Analysis Plan (Section 16)

2. CONTAINER LABELING (PRIMARY AND SECONDARY CONTAINERS)

PRIMARY CONTAINERS DEFINED
These are the original containers from the manufacturer. It is the policy of this company that no containers of hazardous materials or substances will be released for use until the following label information is verified:

* Containers are clearly labeled as to the contents ("identified")

* Appropriate hazard warnings are noted ("physical, chemical or health hazard identified")

* The name and address of the manufacturer are listed for purchased chemicals and a hazardous waste label including the name and address of the generator for hazardous wastes.

SECONDARY CONTAINERS
To further ensure that employees are aware of the hazards of materials used in their work areas, it is our policy to label all secondary containers.

* All tanks and secondary containers are to be labeled with either an extra copy of the original manufacturer's label or with another label to identity the contents and give the hazard warning(s). Note: Tank and stationary container labels must be a minimum of 1 inch tall or clearly visible from 50 feet distance.

* Hazardous wastes containers must have a completed EPA hazardous waste label attached.

3. MATERIAL SAFETY DATA SHEETS (MSDS)

The Material Safety Data Sheets, or MSDS, is the employee's primary source of information for the safe handling of hazardous substances. Employees are entitled and welcomed to copies of the MSDS and may look at them at any time they choose. Copies of MSDS for all hazardous substances to which employees of this company may be exposed are kept in the Office and in the Process Area.

If an MSDS is missing or obviously incomplete, a new MSDS will be requested from the manufacturer. OSHA will be notified if a complete MSDS is not received after requesting one from the supplier.

MSDS are available to all employees in their work area for review during each work shift. If MSDS are not available or new hazardous substance(s) in use do not have MSDS, please report this immediately to the Office Manager!

In general, each Material Safety Data Sheet contains the following information (the actual "sections" may differ individually):

1. General Information
   a. Manufacturer's name, address, and phone number
   b. Chemical trade name and family
   c. Emergency phone number
   d. Revision date

2. Chemical Composition
   a. All hazardous materials > 1%
   b. All carcinogens > 0.1%
   c. CAS (Chemical Abstract Service) numbers

3. Physical/Chemical Data
   a. Boiling point, melting point, specific gravity, vapor density, water solubility, evaporation rate, odor, appearance, vapor pressure
   b. Reactivity (chemical incompatibilities)

4. Fire/Explosion Data
   a. Flash point
   b. LEL/UEL (lower and upper explosive limits)
   c. Decomposition products
   d. Extinguishing methods
   e. Special Personal Protective Equipment

5. Health Hazard Data
   a. Routes of exposure — inhalation, ingestion, skin/eye contact
   b. Acute and chronic effects
   c. Symptoms and Signs of exposure
   d. Pre-existing conditions to be avoided
   e. LD/LC 50 (lethal dose or lethal concentration 50%, rat kill tests)

6. Occupational Exposure Limits
   a. TLV/PEL (Threshold Limit Value or Permissible Exposure Limit)
   b. STEL (Short-term Exposure Limit)
   c. TLV (ceiling Threshold Limit Value)

7. Emergency First Aid Information
   a. Contact Emergency Coordinator/911

8. Spills and Waste Disposal Information
   a. Contact Emergency Coordinator

9. Personal Protective Equipment Requirements
   a. Skin and eye protection
   b. Respiratory protection

10. Additional Precautions and/or Regulatory Status
   a. Storage
   b. Handling
   c. Reporting Limits

4.1 LIST OF HAZARDOUS SUBSTANCES

The following is a list of the types of hazardous substances and wastes present at J & B Enterprises. Be advised: This list varies in time and with use. Specific information on each noted hazardous substance(s) can be obtained by reviewing the Material Safety Data Sheets or Uniform Hazardous Waste Manifest or Waste Profile.

Hazardous Substance/Waste	Location/Work Area
Cyanide solutions and solids	Gold Processing Room/Stripping Room Outside shed (storage only)
Gold-iodine etch solution	Gold Processing Room/Stripping Room Outside shed (storage only)
Non-cyanide precious metals solutions	Gold Processing Room/Stripping Room Outside shed (storage only)
m-Nitrobenzene sulfonic acid, sodium salt	Gold Processing Room/Stripping Room
Zinc Dust	Gold Processing Room/Stripping Room
Nitric Acid	Furnace Room Gold Processing Room/Stripping Room (use only)
Hydrochloric acid	Furnace Room Gold Processing Room/Stripping Room (use only)
Sodium Hydroxide or Caustic Soda	Gold Processing Room/Stripping Room

Oxygen	Furnace Room
Propane	Portable cart/Furnace Room
Sodium Hydrosulfite	Furnace Room
Spent filters, wipes, empty containers, and resins with precious metal residue	Gold Processing Room/Stripping Room
Solder dross	Solder Dross Storage Area
Miscellaneous non-hazardous metal scrap (including router dust)	Warehouse/Yard

4.2 PROPOSITION 65 MATERIALS IDENTIFIED

The State of California has identified known and potential substances that can cause cancer, birth defects, or are reproductive hazards. The following are such substances.

Proposition 65 Substance	Hazard Type	Trade Name
Lead and compounds	Carcinogen Reproductive toxic Developmental toxic	Solder dross and as a trace in other wastes
Nickel and some compounds	Carcinogen	Router dust Evaporator solids As a trace component and in hazardous waste at facility
Silica, crystalline	Carcinogen	Router dust
Found as trace components only:		
Arsenic and compounds	Carcinogen	Hazardous waste
Cadmium and compounds	Carcinogen	Hazardous waste
Chromium and compounds	Carcinogen	Hazardous waste

Potential for a trace component only:

Cobalt and Antimony oxides	Carcinogen	All hazardous waste at facility
Selenium sulfide	Carcinogen	Evaporator solids

5. HAZARDOUS NON-ROUTINE TASKS

Periodically, employees may be required to perform hazardous non-routine tasks. A hazardous non-routine task is defined as any task that is or may pose a physical or chemical hazard to the employee. Prior to starting work on such projects, each affected employee will be given information about hazards to which they may be exposed during such an activity and directions on how to complete the task in a safest possible manner. This information will include:

* Specific hazards, chemical or physical

* Protective equipment and safety measures which must be utilized

* Measures the company has taken to lessen the hazards including engineering measures such as ventilation, use of personal protective equipment such as respirators, specific safe procedures, and the presence of another employee and emergency procedures

Examples of non-routine tasks performed by employees of this company:

Task	Hazardous Substance or Physical Hazard
Spill Clean-up	Varies
Furnace Maintenance	Heat, Toxic metals, Lock-out/Tag-out
Process Equipment Maintenance	Cyanides, Caustics, Lock-out/Tag-out
Lock-out/Tag-out of Energized Sources	Electrocution or physical mangling
Confined Space Entry	Oxygen Deficient or Toxic Atmosphere
Elevated Work	Fall Hazards/Falling Objects
Hot Work Heat exertion and stress	

Lock-out/Tag-out (Control of Energized Sources)

Each year, thousands of workers are injured on the job due to the accidental release of energy. These injuries could have been prevented if proper Lock-out and Tag-out procedures had been followed.

Lock-out is a padlock placed on a power source with a Lock-out device that physically holds and energy control point (switch, lever, valve handle) in the "off" position.

Tag-out is a written warning that tells other workers not to operate a switch, lever, or valve that could set a machine in motion. Though the tag acts as a warning device, it does not physically prevent someone from releasing the energy.

At J & B Enterprises, any entry into the evaporator, concentrator, or furnaces for repair or maintenance operations requires Lock-out-Tag-out procedures. Entry is defined as insertion of only your hands, head, or any part of your body. Lock-out and Tag-out procedures are also required when performing work on electrical circuits; including all maintenance and installation operations.

Employees may not work in a situation, requiring Lock-out-Tag-out procedures, unless they've received authorization from Ken Epsman, and have completed Lock-out-Tag-out training. Associated with this training, you will watch the Lock-out/Tag-out training videotape.

The key components of the Lock-out/Tag-out program are listed below, and are described in detail on the following pages.

* Identification of all energy sources
* Isolation ("Lock-out") of energy sources
* Tag-out of energy sources
* Test for residual energy
* Lock and tag removal procedures
* Equipment start-up procedures

Confined Space Entry Procedures

A confined space is an enclosed area where entry and exit are limited and there is unfavorable natural ventilation, which could cause a build-up of a dangerous atmosphere. This usually includes tanks, vats, vessels, tunnels, sewers, etc.

As an employee at J & B you will not (and must not) work in this type of situation; however, if there were to be an accident in which hydrogen cyanide was being released faster than the ventilation system in the process room was removing it, then the room could be considered a confined space!

If there is a build up of cyanide gas in a room you must leave immediately. Do not re-enter the room! Only a few breaths of air contaminated with hydrogen cyanide can kill you. If you can do so without exposure to yourself, remove any injured persons from the room. Sound the alarm. Follow the evacuation and chemical release procedures.

6. HAZARDOUS SUBSTANCES IN UNLABELED PIPES

It is the company policy to clearly label all hazardous substance process piping to ensure that any employees required to work on or with unlabeled pipes are informed as to the hazardous substances contained within, the following policy has been established:

Prior to starting work on unlabeled pipes employees are to contact Ken Epsman, Jimmy Hague, or Tom Stillson for the following information:

* The hazardous substance in the pipe
* Potential hazards
* Safety precautions, which shall be taken
* Appropriate emergency response equipment location and procedures

NOTE: If there is any possibility that confusion may arise over the contents of a pipe or hose, it shall be labeled, even if it is non-hazardous. The immediate possession guidelines will apply to hoses and pipe, as for any secondary container, in that if the hose or pipe is in the immediate possession of someone working with it, it does not require labeling.

7. INFORMING CONTRACTORS

To ensure that outside contractors work safely in our plant, all contractors coming onto the property will be inform of the following information:

a An identification of any and all hazardous substances and/or wastes to which they may be exposed while on the job site

b. Precautions the contractors must take to lessen the possibility of exposure by usage of appropriate protective measures

NOTE: It is the responsibility of all employees to advise or warn any visitor at our facility of any dangerous situation that such a visitor may encounter.

Please see the following "Notice to Contractors" memo for additional details. This general memo may be given to contractors as an initial notice, but each new contractor must be advised as to the specific hazards that they may encounter in completing their work.

Sample of document provided to contractors working on-site

MEMO - NOTICE TO CONTRACTORS MEMOS

Subject: OSHA and Proposition 65 Notification Requirement

Dear Contractor:

State and Federal Law requires us to notify you that there are hazardous materials in use at our facility. J&B uses or processes materials that contain cyanide, lead, nickel, copper, or other metals, are corrosive, and are toxic, can cause cancer, birth defects, or are reproductive hazards. J&B will be happy to advise you as to the areas where these materials are used and what may need to be done to work safety around them. We request that you ask us if you have any question as to the safety measures needed or the possible exposure to any of the hazardous materials or waste at our facility.

We maintain a set of Material Safety Data Sheets (MSDS's) for the hazardous substances that we use, and you are welcome to copies for any materials that you would like information on. We will be happy to assist you in understanding the MSDS's and to direct your attention to any specific hazards that you may encounter and to how to mitigate these.

Respectfully yours,
J&B Enterprises

8. CHEMICAL SEGREGATION GUIDELINES

The purpose of segregating chemical is to eliminate and/or reduce the chance of incompatible chemicals mixing and reacting, thereby causing a fire, explosion, toxic gas release, or any other adverse reaction.

The greatest hazard at J & B Enterprises would be from improper chemical segregation comes from the possibility of cyanide, either liquid or solid, mixing with acid, weak alkalis, or an oxidizer. (Read the MSDS's for specific handling and storage.) Hydrogen cyanide gas is released when cyanide is exposed to acid, weak alkalis, or an oxidizer. Deaths from cyanides have occurred because cyanide was mixed with an acidic solution, or even with water or air causing a release of hydrogen cyanide gas.

Extreme care must be taken to ensure than cyanides and acids, oxidizers, or other incompatible materials are never stored or mixed together.

In addition, some general chemical segregation guidelines are given as follows; but are sure to review the MSDS's and/or a DOT shipping guide for a complete determination. The general guidelines are as follows:

<u>Group 1</u> <u>Flammable and Combustible Red Labels (liquid and solids)</u>
Store: Flammable, combustible. Avoid paper, cardboard, burnable organic.
Exclude: All Groups 2, 3, 4, and 5 materials.

<u>Group 2</u> <u>Acid, Corrosive Black/White Labels (liquid and solids)</u>
Store: Materials with a pH of less than 7. Note: Technically, acid corrosive materials are defined as having a pH or 2 or less, we store 'weak' acids with these materials as compatible.
Exclude: All Groups 1, 3, 4, and 5 materials.

<u>Group 3</u> <u>Oxidizers, Oxidizer Black/Yellow Labels (liquid and solids)</u>
Store: Strong acids, such as Nitric Acid with a concentration of over 40%, or other Oxidizer labeled materials. NOTE! Not all "oxidizers" may be stored together. Check the MSDS <u>and</u> another reference source to make sure that they will not react if mixed.
Exclude: All Groups 1, 2, 4, and 5 materials.

<u>Group 4</u> <u>Alkaline (base or caustic), Black/White Corrosive Labels (liquid and solids)</u>
Store: Materials with a pH of greater than 7. Note: Technically, caustic corrosive materials are defined as having a pH or 11 or greater, we store 'weak' caustics with these materials as compatible.
Exclude: All Groups 1, 2, 3, and 5 materials.

<u>Group 5</u> <u>Toxic/Poisons, Black/White Poison Label (liquid and solids)</u>
Store: All cyanide solutions or solids have specific storage areas. Precious metal solutions will be stored in the gold recovery room, or in the strip tanks.

Group 5 materials may need to be stored on a case-by-case basis. Check the MSDS and another reference source to make sure that they will not react if mixed.

Exclude: All Groups 1, 2, 3, 4, and possibly some 5 materials.

Group 6 Other materials. Other materials that do not meet the above descriptions may arrive at the facility. All of these materials will need to be sorted and stored on a case-by-case basis. Check the MSDS and another reference source to make sure that they will not react if mixed.

9. WORKING WITH CYANIDE - SAFETY PRECAUTIONS

Care must be taken when working with cyanide to prevent exposure or a chemical reaction that could lead to an exposure.

Deaths from cyanides usually occur because the cyanide was mixed with an acidic or other reactive or incompatible solution, or adequate ventilation was not provided, allowing the build up of hydrogen cyanide gas.

Hydrogen cyanide gas is extremely toxic, as little as a single lungful can be fatal (at 150 - 300 PPM) or a few lungfulls at a lower concentration (of 25 - 50 PPM) over a longer period of time) can kill you. Ingestion of as little as 25 mg/kg, about $1/10^{th}$ of an aspirin, can kill you.

Hydrogen cyanide (HCN) gas is released slowly when cyanide is mixed with water, mildly alkaline solutions or exposed to air. This gas can build up to dangerous levels. Any spill of cyanide solution or powder, or any open container will release some hydrogen cyanide gas. HOWEVER, hydrogen cyanide gas can be generated <u>instantly</u> if mixed with an acid, oxidizer, or other certain strong chemicals, and kill you immediately.

Cyanide can be taken into your body in three ways:

1. Ingestion – as mentioned before, a very small amount of can kill

2. Absorption through the skin and eyes – HCN can be absorbed directly into the blood and kill (beware cuts, sores, and cracks in your skin)

3. Inhalation - inhaling a very small amount can result in immediate death

In order to avoid exposure you must follow these rules:

1. Do not eat, drink, or smoke in any room containing hazardous wastes or chemicals. Always wash before eating drinking or smoking.

2. Wear the proper protective clothing for the job you are doing. Always wear gloves, goggles and an apron when working with cyanide.

3. Do not work directly above the cyanide tanks. Stand back so that you are not breathing the air coming off the tanks or containers of cyanide.

4. Do not work with cyanide if the ventilation system is not working. If you smell the cyanide or feeling weak, dizzy, nausea, headache or confusion it may not be working properly.

5. Never store cyanide and acid together, not even for an instant! When acidic solutions are used for gold purification in the process room, it is very important that only the

minimal amount of acid needed to do the job be brought into the process room, and that the acid is secondarily contained at all times when in the process room. In addition, all acidic precious metal purification residues must be IMMEDIATELY neutralized using caustic soda and transferred to the evaporator for further reclamation.

Mixing Solutions

Be extremely careful when adding any chemical to a cyanide solution. Always wear proper protective clothing. If you are going to mix any chemicals, always check the pH of both solutions. It may be possible that you have a chemical that is not what you think it is. If the ph of one solution is acidic (pH less than 7.0) do not mix the solutions until you have made the following determinations:

1. If both solutions are acidic and are not labeled cyanide it is ok to continue.

2. If one solution is basic (pH greater than 7.0) and one solution is acidic, do not continue until you double check that either solution does not contain cyanide. Some forms of cyanide are stable in mildly acidic solutions (pH greater than 4). These solutions can be mixed with basic cyanide solutions as long as the mixture remains basic. Solutions should be mixed slowly and the pH should be checked after each addition of the solution. (As a general rule for safe chemical handling, small amounts of acidic solution should be added to the basic solution, the basic solution should never be added to the acidic solution. But never add acids to any cyanide solutions!)

3. Always check the label before mixing any chemicals, and always inspect and look at the waste when emptying the container. Stop if there is anything that does not look right.

4. Always mix small amounts first to ensure that there is no reaction.

5. Follow the specific procedures outlined for the type of solution you are working with.

Cyanide Antidote Kit

NOTE: The facility has a Cyanide Antidote Kit store in the hallway between the employee offices and the assay room, on top of the file cabinet at the end of the hallway. Please note: The kit is only for use in an imminently life-threatening situation where someone has had a significant Hydrogen Cyanide, Cyanide, or Cyanide gas exposure.

WARNING! If someone has had a Cyanide exposure, it is very probable that it would have been as a gaseous state and persons attempting to conduct rescue and/or retrieval of someone passed out could also become exposed and this could be life threatening! Ensure that adequate ventilation has been provided, and that there are no other fumes or other methods of Cyanide exposure that can affect you before attempting rescue! Also, warn all responders as to the hazard!

10. ACCIDENT PREVENTION

In order to prevent on the job accidents you should be following these rules for Safe Chemical Handling and Safe Work Practices. You should always stay alert and think ahead so you don't run into unexpected trouble. If you have any safety tips to add, bring them up. Injuries or illnesses that occur on the job must be immediately reported to your Supervisor! Similarly, any dangerous or unsafe conditions must also be reported!

Safe Chemical Handling

In order to handle chemicals safely it is necessary to limit exposure to safe, no harm levels. This is accomplished via a mixture of engineering controls, work practices, safety procedures, and administrative controls that you must be aware of and follow when you work with any chemicals.

The primary means of maintaining chemical exposures at no harm levels are engineering controls which consist of ventilated hoods above (or as part of) the chemical work stations; as well as an enclosed fume hood. If this equipment is not working for any reason, such as a power outage, you are not to work with chemicals.

Safe work practices include wearing the required personnel protective equipment and following the standard procedures for the task you are working on. Whenever you are in the chemical process area or are working with chemicals you must also follow these rules:

1. Always wear proper protective clothing. This is discussed in the following section of the training plan and in the procedures for each chemical handling task.

2. Handle materials so as to prevent exposure. Always think ahead as to the consequences of what you are doing and how you might be able to do it in a safer manner.

3. Follow these rules of good hygiene:

   a. Don't eat, drink, smoke, apply lip balm or cosmetics, or handle contact lenses in the process or storage rooms (chemical or scrap).

   b. Always wash after handling chemicals, and before eating, drinking, or smoking.

4. Always examine all personal protective equipment before use to ensure an absence of holes, rips, or other damage. Any damaged personal protective equipment must be replaced prior to use!

5. Always decontaminate all personal protective equipment after use and leave in the work area. It is very important that personal protective equipment not be worn out of the work area in order to prevent contamination of surfaces in the common areas, such as the lunchroom. Never remove used personnel protective equipment from the chemical process or storage rooms unless it is packaged for disposal or cleaning.

6. Always check the pH of all incoming hazardous "wastes" directly upon arrival to ensure proper identification (and safe handling), and immediately record the pH value in the Operating Log. Notify the Emergency Coordinator immediately if there are any unexpected pH values, or other problems. See the Waste Analysis Plan for additional details on waste acceptance procedures.

7. Ensure proper chemical segregation, and never store acid and cyanide together, not even for an instant!

8. When mixing chemical solutions, such as in the precious metal reclamation process, always check the pH of ~~both~~ any new or unknown chemicals before mixing, to ensure that you are not mixing cyanide with acid.

7. Always follow the authorized procedures for working with cyanide!

8. Nonessential employees should not be located in the process area.

9. Follow the decontamination procedures when you are done with a job. Do not touch objects with gloves if they are not part of the chemical process equipment.

Safe Work Practices

Besides following safe chemical handling procedures you must remain aware of other hazards. This is important because the following types of activities; improper lifting and carrying, tripping, falling, slipping, and pinching cause most accidents in the workplace. In order to prevent accidents you should follow these general safe work practices:

1. Stay alert. Be aware of possible hazards.

2. Work with good visibility. Many hazards can be avoided if they are seen. Turn on the lights, turn away from glare, do what is necessary to increase visibility. When driving the forklift, it is essential to maintain good visibility (see also the forklift safety program) and never allow any "passengers" to ride on the forklift.

3. Be careful of slip and trip hazards, such as obstacles, spilt liquid, rough uneven ground, oil and water, pipes, highly polished floors. If you see a slip or trip hazard remove it, fix it, or clean it up. If you cannot do this then barricade it or put up a sign and report it to your supervisor. Use caution if you must walk over it.

4. You must be smarter than an inanimate object or the objects you are working with.

5. Do not operate any equipment, machinery, or vehicles if you are taken any medicine that may affect your performance.

6. Do not use a ladder with missing rungs, worn or slippery treads, or that generally looks unsafe. And NEVER stand on the top step of any stepladder!

7. Do not allow yourself to become distracted if you are working with powered equipment or tools, working with chemicals, or working with the furnaces.

8. Do not use the furnaces with out heat protective gloves and eye protection.

Most accidents could have been prevented if the employee had stayed alert, used proper safety equipment, and followed safe work practices.

Drum Handling Procedures

NOTE! If you have any doubt as the contents of a drum or as to the safety in opening a drum, DO NOT OPEN IT! Report it immediately. Improper drum handling can cause injury due to strains, hits and bangs, or chemical exposure. Drums can be punctured during improper handling causing a release to the environment. Following the proper procedures for opening drums will prevent accidents. Always observe the following procedures:

1. Always wear the appropriate safety gear, including boots, for the type of material contained in the drum.

2. Check that the bung or ring is in place and tight before attempting to move the drum. Also checks for leaks and do not try to move a leaking container.

3. When rolling drums tip the drum slightly on its edge, proceed ahead of the drum, move slowly and do not cross your hands or your feet.

4. When using a drum dolly be extremely careful that the prongs are under the drum. Many spills are caused by punctures from drum dollies.

Opening Drums

1. Always use the a bung wrench or drum opening tool

2. Place your gloved hand over the drum opening as you start to open it. Listen for a hiss of escaping vapor or gas. Allow the pressure in the drum to release completely before opening the bung to avoid being sprayed with escaping contents. This is especially important in hot weather when the contents expand, and with nitric acid.

3. Be aware of the contents of the drum before you open it. Understand the hazards involved if you have contact with the contents and know the appropriate measures to take if you have contact. If you are unfamiliar with the contents see you supervisor and read the Material Safety Data Sheet before you open the container.

Health and Safety Policy

It is the policy of J&B Enterprises to enforce their safety-training program. Any employee found to be in violation of any safety code or procedure may be fired on the spot. However, in general, employees will first be given a verbal warning, which will be written down in a record for any first offense. Should the employee have a second offense of a safety policy or procedure, they will be given a written notice and may be sent home without pay for up to two weeks time. For a third such violation, an employee may be terminated on the spot.

In any event, if it is determined in the opinion of the management, that any single violation of a safety procedure, protocol, or policy is so serious or life threatening, that employee may be fired on the spot, whether it is a first, second, or third offense.

The California Health and Safety Code requires that all employers provide employees with safety gear and equipment sufficient for the employees to conduct their work in a sufficiently safe manner. Please inspect, maintain, and use it and let us know if it needs replacing. Employees who do not, or will not use safety gear, or who are found using inadequate safety gear, may be fired.

It is our desire to have a safe work place. It is your responsibility to bring to our attention any unsafe condition, work practice, or situation. In fact, failure to do so is a violation of our safety policy. Our policy is that all such warnings will be looked into and no employee will be reprimanded for any good faith act of notifying us if they think something is wrong. We appreciate your conscientious behavior.

11. PERSONNEL PROTECTIVE EQUIPMENT

Respiratory Protection

At J & B Enterprises we do not use respirators except on a rare occasion and then only as a precautionary measure. This is because air-purifying respirators do not provide adequate protection against hydrogen cyanide or nitrous oxide fumes. Instead we keep cyanide gas, mist, and dust levels at low, safe working levels, by providing good ventilation and observing proper mixing and handling protocols. However, there are other, legitimate and necessary uses of air purifying respirators and they may be used for these purposes..

If the ventilation system is working and there is no chemical reaction or spill releasing high amounts of hydrogen cyanide, the level of hydrogen cyanide in the air should be low. Always work with cyanide under in a ventilated piece or equipment or area. If there is a power outage, a suspected power outage as during a strong storm, or the emergency power supply to the ventilation system is not working properly do not work with cyanide. If you are working with cyanide when the ventilation system stops working, stop work, close the container and enclose the container in the chemical hood if it is feasible.

The only respiratory protection approved for a dangerous atmosphere contaminated with cyanide gas fumes is an air supplied respirator and an encapsulating suit (Level A Protection). Because this system is complicated to use and required specialized training, and because cyanide gas is very toxic, we feel that it would not be advantageous for inexperienced personnel to use this equipment. If you suspect there has been a release of cyanide gas you should warn other personnel and evacuate the building immediately, while sounding the alarm and following the evacuation procedures.

If you feel or think the levels of hydrogen cyanide gas are higher than normal, such as from smell, or you feel dizzy, nausea, confusion, headache, weakness, blurred vision, eye, skin, or nose irritation, leave the area immediately! Tell your supervisor (note that hydrogen cyanide is described as sometimes having an ammonia- or bitter almond-like odor, but in many instances, it has no odor at all).

Other PPE/Safety Gear

Whenever you are working with cyanides, sodium hydroxide (caustic soda), or nitric acid that may cause exposure, you must always wear gloves, chemical splash goggles or a face shield, rubber boots and a chemical resistant splash apron or other appropriate safety gear. NO EXCEPTIONS. The type of safety gear has been chosen for you in order to provide the best protection from the chemicals present at J & B Enterprises.

This is for your protection. Fatal amounts of cyanide can be absorbed through the skin and eyes or by inhalation or ingestion. Sodium hydroxide causes severe burns and blindness. Nitric acid, and nitric acid fumes cause severe burns. If you are using proper protective clothing and working in a cautious manner in a ventilated area, you can avoid chemical exposure.

Care, Cleaning, and Maintenance of PPE/Safety Gear

When you are working with chemicals you must take care to not contaminate any areas outside your work area. This is for worker protection from contamination and will help prevent any chemical reactions with incompatible materials.

When you are wearing your safety gear do not touch objects with gloves if they are not part of the chemical process equipment. Never remove used personnel protective equipment from the process room unless it is packaged for disposal or cleaning.

When you are finished with your task you must decontaminate your gloves and boots before removal. This means you must rinse them thoroughly in either the rinse tank or a special tray set up for this purpose. Gloves should then be washed with soap and water in the sink.

Goggles and/or faceplates should be cleaned regularly. Follow the manufactures instructions. If boots or gloves have become soiled as with perspiration, your supervisor

will issue you a clean set. Used gloves and boots will be decontaminated or disposed of as a class one waste.

Your personnel protective equipment shall be stored in the bathroom in the process room, after it has been decontaminated. If any of your personnel protective equipment has been damaged such that it may not work as intended, you must notify your Supervisor and obtain replacement equipment, and may not work in a job task requiring the use of such equipment until it has been replaced.

12. HAZARD COMMUNICATION TRAINING

Training and testing will be given for the preceding subjects (sections 1 - 12 above) during the introductory 40-hour training program. The testing will specifically cover the following subjects:

* Hazard Communication Overview
* The MSDS
* Hazardous Materials in the Workplace
* Introduction to Toxicology

After the initial training and presentation you will be given a quiz in order to test your comprehension of the material. These quizzes will be put into your permanent file, so pay attention! A quiz or test may be given again for subsequent training session as needed to ensure that the employees are sufficiently knowledgeable about the training. This will be done at the trainers' discretion. These quizzes may differ from those herein, but copies of all the corrected refresher quizzes will also be kept with the employee training documentation records.

PART 2: SECTIONS 13 – 20

13.1 RCRA FACIILITY AND CALIFORNIA REGULATIONS FOR HAZARDOUS WASTE FACILITIES

The RCRA Facility and Cal-EPA Hazardous Waste Operator Training consists of a brief review of some of the Federal (RCRA) and State Hazardous Waste Regulation requirements, as they affect employee operations at J & B Enterprises. All employees need to understand the following:

1. Our facility is a Hazardous Waste Facility, that is, it treats, stores, and handles other people's hazardous wastes. Our facility is a Series "B" facility, we are allowed to handle specific hazardous wastes only; we cannot accept or treat just any hazardous wastes.

   Our facility has been engineered and designed to receive, treat, and store select precious metal solutions and solids only; other hazardous wastes may be incompatible and unsafe. Before any hazardous waste is picked up, it must have a profile prepared by the generator, be approved to be accepted, and the profile be filed in the record. No waste that has not been approved may be picked up or accepted; that is the law.

2. All hazardous wastes coming into the facility must have an EPA ID Label on them, and the label must be complete. In addition, the waste containers coming into the facility must have the required DOT hazard warning placards, a waste profile, and a Uniform Hazardous Waste Manifest (UHWM).

3. All hazardous wastes coming into the facility must be stored in specific approved storage locations. These are identified in the facility Operation Plan (a copy of which is kept in the conference room for your referral). In brief, Solder Wastes must be stored in the Solder Storage Area adjacent to the maintenance area; precious metal solutions must be stored in the Gold Recovery Room; solid cyanide wastes and materials should be stored in the Cyanide Storage Shed; and scrap, electronic or otherwise, may be stored in the yard or warehouse for processing.

4. All hazardous wastes generated at the facility must be labeled with the mandatory EPA Hazardous Waste Label and a DOT shipping container-warning label (placard) at the time it is generated and placed in the container. All of the information must be filled out on the EPA ID label except for the Uniform Hazardous Waste Manifest Number (UHWM), which will must be added to the label once the manifest is prepared and prior to shipping the container.

5. In addition, no employee who has not received the 24-hour initial hazardous waste operator training may handle or treat any hazardous waste.

Permit Requirements

All treatment, storage, and disposal facilities must apply for a permit to operate from the EPA, or duly authorized state agency. In California, many facilities that are involved in the recycling of hazardous wastes must also apply for, and obtain a permit. J&B Enterprises has a permit under the Standardized Permit Program (Series B), as described in Title 22 CCR 66270.66 and the California health and Safety Code section 25201.6. Our permit described and is approved for the following:

As described in the Part A of the application:

1. The hazardous waste treatment and storage activities to occur
2. The design capacity of the facility treatment and storage processes and structures
3. The hazardous wastes to be handled at the facility

As described in the Part B application:

1. Facility owner, operator, and property owner
2. Facility location and layout
3. Detailed tank and equipment drawings
4. Waste Analysis Plan
5. Detailed description of all containers and tanks used for hazardous waste, and related secondary containment structures
6. Closure plan
7. Phase I environmental assessment
8. Financial responsibility for closure and environmental impairment
9. Disclosure statement
10. Professional Engineers certification of tanks and secondary containment structures

In addition to the above permit requirements, each employee is required to know the following specific requirements:

Hazardous Waste Containers

Hazardous waste may not be placed, or left, in a container, which is leaking, or not in good condition. Any waste in such a container must immediately be transferred to a good container, or handled in some other legal manner (e.g. transferred to processing tank).

Hazardous wastes must not be placed into a container if they are incompatible with the container, or liner, such that the ability of the container to hold the waste is impaired.

Hazardous waste containers must be closed at all times, except when material transfer operations are actually taking place. In addition, containers may not be opened, stored, transferred, or otherwise handled in a manner that may cause it to rupture or leak. All re-use of containers for waste transportation purposes shall comply with DOT regulations.

All container storage and transfer areas must be inspected at least once per week to look for deterioration of containers or secondary containment systems.

Any containers that are used to hold ignitable or reactive waste must be at least 50 feet from the property line.

Incompatible hazardous wastes must not be placed in the same container, nor can they be placed in an unwashed container that previously held an incompatible waste or material. Furthermore, any container of incompatible waste shall be separated or protected by berm, dike, wall, or other similar isolating device.

Tanks

Only tanks that have been permitted may be used to treat any hazardous waste. Only hazardous waste permitted to be treated for any particular tank must be a specifically approved waste stream. Any tank that is not in good condition must be removed from operation and assessed as to whether or not it can be repaired or must be formally closed and replaced with a new one.

All tank systems must have secondary containment that is sufficient to prevent a release to the environment (include fire sprinkler water if located in any area with such). Secondary containment systems must be designed, installed, and operated to prevent migration of hazardous wastes or accumulated liquid out of the system, and must be capable of detecting and collecting releases and accumulated liquid until the material is removed.

Hazardous waste and treatment reagents may not be placed in a tank if they could cause the tank, or associated secondary containment system or ancillary equipment, to rupture, leak, or otherwise fail. In addition, sufficient controls must be used to prevent spills and overflows from tanks and secondary containment systems, including spill prevention controls, overfill protection devices, and maintenance of sufficient freeboard (minimum 2 feet for an uncovered tank outdoors, except under specified conditions).

The operator must inspect each tank system at least daily when in use for the following:

1. Overfill and spill control equipment to ensure that it is in good working order.

2. Aboveground portions of each tank to detect corrosion.

3. All data gathered from monitoring and leak detection equipment, if applicable.

4. Tank construction materials and the area immediately surrounding the accessible portions of the tank (including secondary containment structures) to detect erosion or signs of a release.

5. The waste level in each uncovered tank (to ensure proper freeboard level).

6. Any tank, or secondary containment, system from which there has been a leak or spill, or which is found to be unfit for use, shall be immediately removed from service. The facility must then immediately stop the flow of hazardous waste into the tank or containment system, and identify the cause of the release.

7. If the release in question was to the secondary containment system, all materials must be removed from the containment system as quickly as possible in order to prevent danger to human health or the environment.

8. Any release to the environment must be reported within 24 hours to the DTSC; unless less than 1 pound were released, and it was immediately cleaned up. A detailed follow-up report must follow within 30 days, as described in 22 CCR 66265.196(e)(3).

Prior to placing any tank or secondary containment system back into the service, the following conditions must be met, as appropriate:

1. If the release in question was a spill that did not damage the integrity of the system, the tank may be returned to service as soon as the released waste is removed and any necessary repairs are completed.

2. If the release was the result of a leak from a tank to a secondary containment system, the system must be repaired prior to being returned to service.

3. If the release involved a tank system without secondary containment, such secondary containment must be provided prior to returning the tank to service, except as specified in 22 CCR 66265.196.

4. If any extensive repairs are performed on any tank, or secondary containment system, the system may not be placed back into service until the facility has a certified assessment as to the suitability of the repaired system to handle hazardous waste, as per the requirements of the regulations. An independent qualified professional engineer must sign the certification.

13.2 OTHER HAZARDOUS WASTE REGULATIONS

Identification of Hazardous Waste Generators Responsibility

The waste generator is responsible for determining if each of the wastes they generate is hazardous. In order to do this, the generator must first determine if the waste has been excluded from regulation, as specified in 22 CCR 66261.2 through 66261.4 and California Health and Safety Code 25143.2. Excluded materials include domestic sewage, industrial wastewater discharges, irrigation return flows, in-situ mining materials, some nuclear wastes, household and agricultural wastes, and drilling muds.

If the waste has not been excluded, the generator must then determine if the waste is a specifically listed hazardous waste (from a specific or non-specific source), or if it possess one of the hazardous waste characteristics of ignitability, corrosivity, reactivity, or toxicity. Laboratory analyses and testing and/or knowledge of the waste can perform these determinations.

Many waste materials are excluded from federal hazardous waste regulations if they are recycled, but this is often not the case in California. California regulations are more stringent and regulate more wastes.

Generators may only offer hazardous wastes for off-site transportation if they are using an approved waste manifest, and if the waste is shipped via licensed transporter to a permitted facility. In addition, all containers and packaging must meet DOT and EPA/DTSC specifications.

General Notification Requirements

All hazardous waste handlers must notify the EPA and/or DTSC of their waste handling activities. This includes all waste generators, transporters, and treatment, storage or disposal facilities. The only exceptions are for small-scale generators who generate less than 5 tons of hazardous waste per year, all of which is recycled.

The EPA or DTSC will issue an EPA Identification number to the facility, which must be used on all manifests. This EPA ID # is required in order to perform any waste handling operations (except for the small quantity exception referenced above).

Classification of Handlers

There are four basic types of hazardous waste handlers, as follows:

1. Generator - produces waste as a consequence of manufacturing. Some waste facilities also generate waste through their handling operations (e.g. mixing or neutralizing).

2. Transporter - transports waste from one location to another. Some exemptions exist for rail transporters.

3. Treatment, Storage, or Disposal Facilities:

   a. Treatment - recycling or detoxifying

   b. Storage - with certain exceptions, any handler that keeps waste on-site generated wastes for more than 90 days, or off-site generated wastes for more than 24 hours prior to treatment or for longer than the transfer station limits listed below prior to transferring the waste off-site.

c. Disposal - landfill, incinerator, etc.

4. Transfer stations - locations in which wastes are kept in sealed containers for 6 days or less (this increases to up to 10 days in industrial zoned areas), providing that all containers and packaging are DOT approved for the materials therein, and that the waste handling operations consists solely of transferring containers from one vehicle to another with no repackaging or other handling.

Manifest System: Cradle To Grave Control

A generator who offers hazardous waste for transportation must prepare a manifest that includes the following:

1. Manifest document number
2. Name, address, and phone number for generator
3. Name and EPA ID # for transporter
4. Name, address, and EPA ID # for waste receiving facility and alternate, if desired
5. DOT shipping name and legal description of the waste
6. Waste quantity and container numbers

The generator must also sign a certification statement that the shipment meets all federal, state, and local hazardous waste regulations, and that the generator has a program in place to reduce, as feasible, the volume and toxicity of the hazardous waste generated on-site. In many cases, the generator must also attach a signed Land Disposal Restriction notice to the manifest.

Prior to shipping the waste off-site, the transporter must sign the manifest as indicated, and leave copies with the generator. The generator is required to send one of these copies to the DTSC within 30 days. The remaining copies of the manifest must then accompany the waste throughout the shipment.

Once the waste arrives at the receiving facility, the manifest must be signed again, and a copy given to the transporter. The facility operator is then required to return one copy of the manifest to the generator and to send a second copy to the DTSC within 30 days of waste receipt.

See also the manifesting systems procedures reviewed earlier in this section; as well as section 14, Driver Training for additional information on manifesting procedures.

All signed manifest copies must be saved for at least three years.

Land Ban Notifications

For those wastes that are listed as being prohibited from being disposed of via 'landfill' or any other land disposal method, by either Federal or State, a Land Disposal Restriction (LDR) Notification shall accompany all uniform hazardous waste manifests.

14. DRIVER TRAINING

As per the Federal Hazardous Materials law (49 U.S.C. 5101 et seq,) and as described in 49 CFR Sections 173.1 and 177.800 through 177.816, all haz mat employees must be trained, tested, and certified, and records must be kept of that training. The training must include the general awareness and familiarization of hazardous materials; be function specific; cover safety and security; and cover actual driver training and shipping.

The training must be given as "initial" training for new hire and be recurrent, that is, given at least once every three years. The training must be completed by someone who is qualified, that is, sufficiently knowledgeable in the needs of the job and the legal requirements to adequately conduct the training. Training may include, but is not restricted to or required to using multimedia, lectures, off-site training services, or on-site safety training. The training may be met by completing other compliance requirements such a OSHA, EPA, DOT, or other Federal or International Agency requirement, so long as it cover the essential components identified and needed to complete the job safely.

Shipping Hazardous Waste

Shippers, drivers and carriers share the responsibility for obeying the law. You can be fined and even jailed for breaking the laws pertaining to the shipment of hazardous waste. For instance, drivers leaving a vehicle with a shipment of hazardous waste unattended, not within 25 feet of his truck, can be personally fined, that is you, the driver, pays. Fines may be up to $10,000 per day. The driver requirements can be broken down into eight areas as follows:

1. Packaging requirements
2. Labeling/Marking requirements
3. Manifesting requirements
4. Placarding requirements
5. Rejections of Hazardous Waste
6. Loading, Stowage, and Unloading requirements
7. In-transit/Emergency requirements
8. Vehicle Maintenance

In order to ensure compliance with shipping regulations it is absolutely essential that all hazardous materials and wastes have a proper DOT shipping description.

Classification and Proper D.O.T. Shipping Name

The classification and proper DOT shipping name for each hazardous material or waste is taken from Title 49 of the Code of Federal Regulations (CFR), Section 172.101, which contains the DOT Hazardous Materials Table. Additional references for hazardous waste shipments are 40 CFR 261, Subpart C (EPA authorized federal hazardous waste identification numbers), and Title 22 California Code of Regulations 66261.126 Appendix 12(Cal-EPA authorized state hazardous waste identification numbers). The

authorized waste description information appears in the certified Waste Profile on file for each generator and waste stream.

The types of wastes that J & B Enterprises picks up from off-site customers include; gold cyanide wastes, gold iodine waste, and solder dross. For each of the hazardous waste types that are accepted by the facility (or generated on-site and transported off-site for further reclamation), we have noted the proper DOT shipping name and hazard class below, along with an identification of the approved packaging types:

List of Authorized Shipping Names, and Shipping Requirements

Note: It is advised that all DOT Shipping, Packaging, Labeling, and Placard be reviewed on a periodic basis against the most current 49 CFR regulations for any changes. Use the following information with this qualification in mind, and if you have any questions ask to the currency of the information, please check with the Office Manager, there may be changes from time to time.

Spent Precious Metal Plating Solution with Cyanide (Waste Analysis Plan item #1)
DOT Proper Shipping Name: Waste Cyanide solutions, n.o.s. (gold or silver cyanide plating solution)
Hazard Class: 6.1
ID Number: UN 1935
Packing Group: III
Labeling Requirements: Poison
EPA waste #: F007, D003 (add D011 for silver) (may also include D002, D004, D006, D007, or D008)
RQ: 10 lbs
State Waste #: 711 (may also include 121, 131, 132, 141, 551, 722, 724, 726, or 728)
Placard Requirements: if > 1,000 lbs total "Poison"
DOT Emergency Response Guide #: 157
Packaging Requirements: See the authorized packaging. *Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.*

Spent Precious Metal Stripping Solution with Cyanide (Waste Analysis Plan item #1)
DOT Proper Shipping Name: Waste Cyanide solutions, n.o.s. (gold or silver cyanide stripping solution)
Hazard Class: 6.1
ID Number: UN 1935
Packing Group: III
Labeling Requirements: Poison
EPA waste #: F009, D003 (add D011 for silver) (may also include D002, D004, D006, D007, or D008)
RQ: 10 lbs
State Waste #: 711 (may also include 121, 131, 132, 141, 551, 722, 724, 726, or 728)
Placard Requirements: if > 1,000 lbs total "Poison"

DOT Emergency Response Guide #: 157
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.

Spent Precious Metal Stripping Solution with Cyanide (alternate name #1) (Waste Analysis Plan item #1)
DOT Proper Shipping Name: Waste Sodium Cyanide
Hazard Class: 6.1
ID Number: UN 1689
Packing Group: I
Labeling Requirements: Poison
EPA waste #: F009, D003 (add D011 for Silver) (may also include D002, D004, D006, D007, or D008)
RQ: 10 lbs
State Waste #: 711 (may also include 121, 131, 132, 141, 551, 722, 724, 726, or 728)
Placard Requirements: if > 1,000 lbs total "Poison"
DOT Emergency Response Guide #: 157
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption does not apply! The packaging must have a Packaging Group code of X!

Spent Precious Metal Stripping Solution with Cyanide (alternate name #2) (Waste Analysis Plan item #1)
DOT Proper Shipping Name: Waste Potassium Cyanide
Hazard Class: 6.1
ID Number: UN 1680
Packing Group: I
Labeling Requirements: Poison
EPA waste #: F009, D003 (add D011 for Silver) (may also include D002, D004, D006, D007, or D008)
RQ: 10 lbs
State Waste #: 711 (may also include 121, 131, 132, 141, 551, 722, 724, 726, or 728)
Placard Requirements: if > 1,000 lbs total "Poison"
DOT Emergency Response Guide #: 157
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption does not apply! *The packaging must have a Packaging Group code of X!*

Spent Precious Metal Plating Dragout Solution (Waste Analysis Plan item #13)
DOT Proper Shipping Name: Waste Cyanide solutions, n.o.s. (gold or silver cyanide plate rinse water solution)
Hazard Class: 6.1
ID Number: UN 1935
Packing Group: III
Labeling Requirements: Poison
EPA waste #: F007 (add D011 for Silver) (may also include D002, D004, D006, D007, or D008)
RQ: 10 lbs

State Waste #: 131 (may also include 121, 131, 132, 141, 551, 722, 724, 726, or 728)
Placard Requirements: if > 1,000 lbs total "Poison"
DOT Emergency Response Guide #: 157
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.

Spent Precious Metal Stripping Dragout Solution (Waste Analysis Plan item #13)
DOT Proper Shipping Name: Waste Cyanide solutions, n.o.s. (Gold or silver cyanide strip rinse water solution)
Hazard Class: 6.1
ID Number: UN 1935
Packing Group: III
Labeling Requirements: Poison
EPA waste #: F009 (add D011 for Silver) (may also include D002, D004, D006, D007, or D008)
RQ: 10 lbs
State Waste #: 131 (may also include 121, 131, 132, 141, 551, 722, 724, 726, or 728)
Placard Requirements: if > 1,000 lbs total "Poison"
DOT Emergency Response Guide #: 157
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.

Spent Precious Metal Solution without Cyanide (Waste Analysis Plan item #2)
DOT Proper Shipping Name: non-RCRA Hazardous Waste, liquid, n.o.s. (gold sulfite solution)
EPA waste #: non-RCRA
RQ: None
State Waste #: 135 (may also include 131, 132, 141, or 551)
DOT Emergency Response Guide #: 171

Spent Precious Metal Solution without Cyanide (alternate name) (Waste Analysis Plan item #2)
DOT Proper Shipping Name: non-RCRA Hazardous Waste, liquid, n.o.s. (gold plating solution with Thallium)
EPA waste #: non-RCRA
RQ: None
State Waste #: 132 (may also include 131, 135, 141, or 551)
DOT Emergency Response Guide #: 171

Spent Precious Metal Solution without Cyanide (alternate name) (Waste Analysis Plan item #2)
DOT Proper Shipping Name: non-RCRA Hazardous Waste, liquid, n.o.s. (gold plating solution with Thallium)
Hazard Class: 9
ID Number: NA 3082
Packing Group: III

Labeling Requirements: Class 9
EPA waste #: non-RCRA
RQ: None
State Waste #: 135 (may also include 131, 132, 141, or 551)
Placard Requirements: if > 1,000 lbs total "Class 9"
DOT Emergency Response Guide #: 171

Spent Precious Metal Solution without Cyanide (alternate name) (Waste Analysis Plan item #2)
DOT Proper Shipping Name: Hazardous Waste, liquid, n.o.s. (gold solution with Arsenic)
Hazard Class: 9
ID Number: NA 3082
Packing Group: III
Labeling Requirements: Class 9
EPA waste #: D004 (may also include D002, D006, D007, D008, or D011)
RQ: 1 lb
State Waste #: 132 (may also include 131, 135, 141, 551, 721, 722, 724, 726, or 728)
Placard Requirements: if > 1,000 lbs total "Class 9"
DOT Emergency Response Guide #: 171
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.

Spent Silver Solution without Cyanide (alternate name) (Waste Analysis Plan item #2)
DOT Proper Shipping Name: Hazardous Waste, liquid, n.o.s. (Silver or D011)
Hazard Class: 9
ID Number: NA 3082
Packing Group: III
Labeling Requirements: Class 9
EPA waste #: D011 (may also include D002, D004, D006, D007, or D008)
RQ: 1 lb
State Waste #: 132 (may also include 131, 135, 141, or 551)
Placard Requirements: if > 1,000 lbs total "Class 9"
DOT Emergency Response Guide #: 171
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.

Spent Iodine Etch Solution (Waste Analysis Plan item #3)
DOT Proper Shipping Name: Hazardous Waste, liquid, n.o.s. (iodine-potassium iodide solution)
Hazard Class: 9
ID Number: NA 3082
Packing Group: III
Labeling Requirements: Class 9
EPA waste #: non-RCRA
RQ: None

State Waste #: 135 (may also include 131, 132, 141, 551, or 726)
Placard Requirements: if > 1,000 lbs total "Class 9"
DOT Emergency Response Guide #: 171
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.

Spent Iodine Etch Solution (alternate name) (Waste Analysis Plan item #3)
DOT Proper Shipping Name: Non-RCRA Hazardous Waste, liquid, n.o.s. (iodine-potassium iodide solution)
EPA waste #: non-RCRA
RQ: None
State Waste #: 135 (may also include 131, 132, 141, 551, or 726)
DOT Emergency Response Guide #: 171

Spent Filters, Wipes, and Empty Containers (Waste Analysis Plan item #4)
DOT Proper Shipping Name: Waste Cyanides, inorganic, n.o.s. (contains gold or silver cyanide plating solution)
Hazard Class: 6.1
ID Number: UN 1588
Packing Group: III
Labeling Requirements: Poison
EPA waste #: F007, D003 (add D011 for silver) (may also include D002, D004, D006, D007, or D008)
RQ: 10 lbs
State Waste #: 181 (may also include 141, 171, 491, 512, or 513)
Placard Requirements: if > 1,000 lbs total "Poison"
DOT Emergency Response Guide #: 157
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.

Solder Dross (Waste Analysis Plan item #5)
DOT Proper Shipping Name: Hazardous Waste, solid, n.o.s. (lead or D008)
Hazard Class: 9
ID Number: NA 3077
Packing Group: III
Labeling Requirements: Class 9
EPA waste #: D008 (may also include D004, D006, or D011)
RQ: 1 lb
State Waste #: 181 (may also include 141, 171, or 172)
Placard Requirements: if > 1,000 lbs total "Class 9"
DOT Emergency Response Guide #: 171
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.

Photo Solutions with Silver (Waste Analysis Plan item #6)
DOT Proper Shipping Name: Hazardous Waste, liquid, n.o.s. (silver or D011)
Hazard Class: 9
ID Number: NA 3082
Packing Group: III
Labeling Requirements: Class 9
EPA waste #: D011 (may also include D007)
RQ: 1 lb
State Waste #: 541
Placard Requirements: if > 1,000 lbs total "Class 9"
DOT Emergency Response Guide #: 171
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.

Silver Epoxy Paste
DOT Proper Shipping Name: Hazardous Waste, solid, n.o.s. (silver or D011)
Hazard Class: 9
ID Number: NA 3077
Packing Group: III
Labeling Requirements: Class 9
EPA waste #: D011
RQ: 1 lb
State Waste #: 541
Placard Requirements: if > 1,000 lbs total "Class 9"
DOT Emergency Response Guide #: 171
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption applies! The packaging must have a Packaging Group code of X, Y, or Z.

Evaporator Solids (Waste Analysis Plan item #12)
DOT Proper Shipping Name: Waste Cyanides, inorganic, n.o.s. (cyanide solids with F007, F009)
Hazard Class: 6.1
ID Number: UN 1588
Packing Group: II
Labeling Requirements: Poison
EPA waste #: D003, D004, D006, D007, D008, D010, D011, F007, F009
RQ: 1 lb
State Waste #: 171
Placard Requirements: if > 1,000 lbs total "Poison"
DOT Emergency Response Guide #: 157
Packaging Requirements: See the attached list of authorized packaging. Limited Quantity exemption does not apply! The packaging must have a Packaging Group code of X or Y!

Occasionally, other types of waste materials may be collected and transported to J & B Enterprises as part of a hazardous waste transfer station operation. If you are presented with a waste for shipment that does not correspond to one of the listings in the table

above, call the office to ascertain that the material can be accepted for transportation to the facility, and that the correct DOT shipping description has been given. In addition, some hazardous waste generators may decide to have their waste materials transported to the facility using an alternate shipping name. Once again, please call the office to ascertain that the material has been accepted for transportation to the facility, and that the correct DOT shipping description has been given.

14.1 PACKAGING REQUIREMENTS

All containers must be free of damage and deterioration, non-leaking, and completely sealed prior to acceptance.

Correct packaging is extremely important. Waste that is not properly packaged could spill during transportation or at our facility. Waste that is not properly packaged or labeled is also illegal to transport. Go through the following checklist before you load the waste:

a. Containers must not be leaking
b. The container must be DOT approved for the specific kind of material.
c. Containers must be in good condition
d. Containers must be sealed

All shipments of hazardous materials or wastes must be made in containers authorized for each waste type as specified in 49 CFR 172.101, and summarized herein. All packaging must have a Packaging Group code of X, or Y; except that Packing Group III materials may be transported in Packing code z containers.

List of Authorized Packaging

The packaging types listed below are the most commonly encountered authorized packaging for the types of waste materials handled at J&B Enterprises. Other packaging is also authorized as indicated in 49 CFR 172.101.

SINGLE PACKAGINGS

Steel drum (closed or removable head)	1A1 or 1A2
Aluminum drum (closed or removable head)	1B1 or 1B2
Other Metal drum (closed or removable head)	1N1 or 1N2
Plastic drum (closed or removable head)	1H1 or 1H2
Steel jerry can (closed or removable head)	3A1 or 3A2
Plastic jerry can (closed or removable head)	3H1 or 3H2
Plastic receptacle in steel drum	6HA1
Plastic receptacle in aluminum drum	6HB1
Plastic receptacle in plastic drum	6HH

COMBINATION PACKAGINGS

Inner Containers
Plastic, metal, glass, or earthenware receptacles

Outer Containers

Steel drum (closed or removable head)	1A1 or 1A2
Aluminum drum (closed or removable head)	1B1 or 1B2
Other Metal drum (closed or removable head)	1N1 or 1N2
Plastic drum (closed or removable head)	1H1 or 1H2
Steel jerry can (closed or removable head)	3A1 or 3A2
Plastic jerry can (closed or removable head)	3H1 or 3H2

Limited Quantity Exemptions

The limited quantity packaging exemptions listed below are not authorized for all of the materials handled by J&B Enterprises, as noted in the List Of Authorized Proper Shipping Names! In any event, the gross weight of the inner and outer packaging with contents may not exceed 66 pounds in order to qualify for the limited quantity exemption.

Inner Packaging - Liquid
≤1 gallon net volume and stored in an upright position

Inner Packaging - Solid
≤11 pounds net weight

Outer Packaging
Strong, fully sealed, and cushioned by packing with adsorbent.

14.2 LABELING/MARKING REQUIREMENTS

Marking and labeling is extremely important, as improperly labeled waste can cause handling problems. Waste that is not properly marked or labeled is also illegal to transport. Check the following before you load the waste:

a. Must be properly labeled with the EPA Hazardous Waste label to indicate:

   Generators name and address
   Proper DOT shipping name
   Proper hazard warnings
   Manifest document #
   Accumulation Start Date
   EPA ID #

b. Some containers, including all those used to hold RCRA hazardous wastes, must also be marked with the DOT authorized diamond hazard warning label, as indicated in the List Of Authorized Shipping Names table above.

c. In addition, any DOT packaging exemptions must be clearly indicated on each container, as "DOT E- (provide exemption number on the container)".

d. Boxes containing multiple inner bottles must be marked, "This end up".

NOTE! BEFORE YOU DRIVE OFF CHECK THE CONTAINERS AGAIN FOR LEAKS AND HOLES THAT COULD HAVE BEEN PUNCHED IN DRUMS FROM INCAUTIOUS DRUM HANDLING WHILE LOADING!

14.3. SHIPPING PAPERS/UNIFORM HAZARDOUS WASTE MANIFEST

The shipping papers for a load of hazardous waste are the Uniform Hazardous Waste Manifest (UHWM or manifest). The UHWM must accompany any load of hazardous waste you pick up, no matter how small. A UHWM must be completed for each generator or each site you pick up from that day. The manifest must be filled out completely and correctly. Most violations from transporting hazardous waste are from improper completion of the UHWM. Detailed instructions on completing the required manifest appear in Title 22 CCR, and are reprinted later in this section of the Training Manual.

14.4 PLACARDS

DOT placarding information is specified in 49 CFR 172.504 Tables 1 and 2. Placards must be correct, and must correspond to the hazard class of the hazardous material you are shipping. See the List of Authorized Shipping Names above for information on the specific placarding requirements for the hazardous wastes that are transported by J&B Enterprises.

a. Vehicles transporting any quantity of Table 1 listed materials must be placarded. This includes explosives (Division 1.1, 1.2, and 1.3), Poisonous gas (Division 2.3), Dangerous When Wet (Division 4.3), Poison (Division 6.1 Packing Group I - inhalation hazard only), and Radioactive III (Class 7).

b. Vehicles transporting over 1,000 pounds of Table 2 listed materials must be placarded. This includes explosives (Division 1.4, 1.5, and 1.6), flammable gases (Division 2.1), non-flammable gases (Division 2.2), Combustible liquid, Flammable liquid (Class 3), Flammable solid (Division 4.1), Spontaneously combustible (Division 4.2), Oxidizer (division 5.1), organic peroxide (Division 5.2), Poison (Division 6.1, except Packing Group I - inhalation hazard only), Corrosive (class 8), Class 9, and ORM-D.

c. Any vehicle, which holds more than 1,000 pounds of cyanide containing waste, which is classified in Packing Group I, or II requires "Poison" placards. Any vehicle, which holds more than 1,000 pounds of cyanide containing waste, which is classified in Packing Group III, requires "Keep Away From Food" placards.

d. When required by the regulations, placards must be placed on each end and side of vehicle.

e. Vehicles containing two or more classes of Table 2 wastes or materials may be placarded "Dangerous", unless the total weight of one of the classes of materials exceeds 5,000 pounds.

f. Special placarding requirements apply to portable tanks, tank cars, and items, which are especially hazardous.

g. If your truck is empty the placard should read drive safely, or nothing at all.

14.5. REJECTION OF HAZARDOUS WASTE SHIPMENT

There may be instances when you will have to reject a load of hazardous waste from the generator. This could occur from the following reasons:

a. Manifest not correctly filled out

b. Containers are leaking or in poor condition and might leak

c. Manifest does not match the label on the waste

d. There is some bias or obvious error, i.e. such as a container labeled acid in an unlined metal drum.

e. Containers not DOT approved for the type of material

f. Container not properly labeled

g. The waste is not acceptable (i.e. an approved waste) at J & B Enterprises.

h. Equipment for safely loading the container is not available

Any time you have <u>any</u> doubts about the safety or legality of the load, call the office, do not take the load if you are not sure it is safe or legal.

14.6. LOADING, UNLOANDING, AND STOWAGE REQUIREMENTS

The DOT requirements in this regard for transportation on public highways are specified in 49 CFR 177.834 to 177.843 and are summarized herein.

a. Materials must be secured against movement within the vehicle and between containers.

b. No smoking or flames are allowed when loading/unloading explosive (Class 1), flammable liquid (Class 3), flammable solid (Class 4), Oxidizer (Class 5), or flammable gas (Division 3.1) materials.

c. The handbrake must always be set during loading/unloading operations, and all other precautions must be taken to prevent motion of the vehicle.

d. Cargo tanks must be attended at all times during loading and unloading operations.

e. Proper tools must be used to ensure containers aren't damaged during loading operations.

f. Special regulations [49 CFR 177.834(l)] exist for the use of cargo heaters with explosive or flammable materials.

g. Special regulations also exist for specific classes of materials: 49 CFR 177.835 explosives (Class 1), 177.837 Flammable liquids (Class 3), 177.838 Flammable solid (Class 4), Oxidizers (Class 5), spontaneously combustible (Division 4.2), 177.839 Corrosives (Class 8), 177.840 gases (Class 2), 177.841 Poisons (Division 6.1) and Poison gas (Division 2.3), and 177.842 Radioactive (Class 7).

h. 49 CFR 177.841 Poisons (Division 6.1) states that - No poisons may be carried in the same vehicle with foodstuffs or in the cab (certain exceptions are specified but are not authorized at J&B Enterprises). Other specific requirements are listed for cargo tanks.

i. Certain classes of materials may not be transported together, as specified in 49 CFR 177.848, a copy of which appears in this section of the Training Manual. Cyanide containing materials may not be transported with acids! Or any other incompatible material that it can react with!

   Special Note for long distance hauling of drums: For any trip over 1 hours time distance driving that involves the transfer of drums, the driver is stop the truck and inspect the load after not less than 30 minutes driving, but not more than 60 minutes after beginning the trip. The driver is to specifically inspect the load to make sure that the restraints (i.e. ropes or straps) holding the drums has not loosened.

14.7 IN-TRANSIT EMERGENCY

The in-transit and emergency transportation regulations are specified in 49 CFR 177.853 to 177.861 and Title 13 CCR, and are summarized below.

a. No unnecessary delays are allowed in the shipment of hazardous materials or wastes.

b. Any shipments that are refused, or cannot be delivered within 48 hours after arrival at their destination must be returned to the shipper.

c. Leaking containers discovered during transit must be repaired or repackaged. They can then be delivered or returned only if safe; otherwise they must be stored in a safe manner.

d. If the vehicle is transporting Division 6.1 materials, and it stops for any reason other than routine traffic stops, warning devices must be set out to mark the hazard, and all precautions must be taken to ensure provide against hazard, including moving the vehicle to a safe area if appropriate.

e. No person may use heat, flame, or spark producing devices to repair or maintain the cargo or fuel containment system.

f. Special accident procedures exist for specific materials per 49 CFR 177.860 poisons (Division 6.1): Keep people away from accident, no smoking or open flames allowed, warn other highway users, prevent liquids from entering streams and storm water drains, and prevent solids from blowing away with the wind.

g. Following the accident the vehicle must be inspected to ensure it is not contaminated. Contaminated vehicles must be decontaminated prior to use.

h. Other specific regulations exist for transportation by rail, air, and vessel.

i. Other specific regulations exist for transportation of hazardous materials/waste along with passengers.

j. Other specific routing, stopping, and inspection requirements exist for transportation of explosive materials, or for cargo tanks containing one of the following: fuming nitric acid, anhydrous hydrazine, or liquid nitrogen tetroxide.

k. Any incident or accident involving hazardous materials or wastes that occurs during loading, transportation, unloading, or temporary storage at the carriers facility must be immediately reported under any of the following conditions: any spill or discharge of hazardous material/waste; any fatality, injury, or hospitalization due to fire explosion, or chemical exposure; any continuing danger to life, health, or natural resources; or an estimated property damage exceeding $50,000. Required incident reports must be submitted to the DOT and DTSC within 30 days. In addition, any

chemical spill that occurs during transportation must be immediately reported to 911. Furthermore, any spill that occurs during loading or unloading operations, and that involves the release of a reportable quantity of waste also requires IMMEDIATE reporting!

14.8 VEHICLE MAINTENANCE

Your vehicle must be good safe operating condition before you leave the facility. Any vehicle needing maintenance must be reported to your supervisor.

If you feel that the vehicle is unsafe to drive or may not make it through the day without the possibility of a breakdown do not use the vehicle until it has been repaired.

Before leaving the facility do an inspection of your vehicle. Walk around it and check the tires and also check for leaking fluids from the vehicle itself or the load. Be sure that all the equipment you will need for the day is on your truck, including your goggles, gloves, and emergency spill response equipment. See the vehicle inspection log for additional details. Make sure that you are placarded and have your paperwork.

14.9 HAZARDOUS WASTE TRANSPORTER PERMIT REQUIREMENTS

All hazardous waste transporters in California are required to submit an annual permit application and fees to include the following items:

a. List of all vehicles and special containers

b. Liability coverage

c. Annual CHP inspection

d. Annual registration fees

e. Disclosure statement

Transporter must notify the DOHS in writing within 30 days in the event of the following:

a. Change of transporter ownership, name or location

b. Change of vehicle or container ownership

c. Spill or accident involving a registered vehicle

d. Loss of liability coverage requires immediate notification!

Transfer Station

Transporters who handle hazardous wastes as part of transfer station operations are exempt from the storage permit requirement. In order to meet the transfer station requirements, wastes must be transported off-site within 144 hours of receipt (a maximum of 240 hours storage is allowed in any location that has been zoned industrial). In addition, the wastes must be received in DOT-specification packaging, and the only handling allowed is the transference of the waste containers from one vehicle to another.

15. PROCEDURES AND PROCESSES USED

All the procedures used at the facility are driven by regulatory requirement. All the processes used (and the equipment to process the waste) are specifically permitted. No process, procedure, or piece of equipment may be used that has not been specifically written into and approved in our permit from the State.

16. WASTE ANALYSES PLAN

The facility Waste Analyses Plan is detailed in the Facility Operation Plan (Part B). In brief, the following is required:

1. Before accepting a hazardous waste, the off-site hazardous waste facility must have a detailed chemical and physical description of the waste. This description can be obtained from the generator, but otherwise must be developed by the facility. Existing published or documented materials can be used to prepare this description, as can lab data.

2. The waste description must be updated whenever the waste changes, or whenever facility analyses indicate that the description is incorrect.

3. The owner/operator of an off-site hazardous waste facility must inspect, and if necessary, analyze each movement of hazardous waste to ensure that it matches the manifest description.

4. The owner/operator of a hazardous waste facility must develop and follow a written Waste Analysis Plan that must specify:

    - Analytical parameters and rationale for the testing each hazardous waste
    - Test methods
    - Sampling and sample handling methods
    - Frequency of analyses
    - Procedures used to determine the identity of each movement of hazardous waste received at an off-site facility

17. FACILITY SECURITY (22 CCR 66265.14)

J&B is required to prevent unknowing entry onto the active portion of the facility, and must minimize the possibility of unauthorized entry of persons, this is accomplished by:

1. After hours security system that continuously monitors and controls access to the active portion of the facility, and by

2. Artificial and/or natural barrier that completely surrounds the active portion of the facility, along with a means to control entry (e.g. attendants, monitors, locked entrances). J&B has security fencing and gates that control access to the facility 24 hours a day. Locked gates and doors control all access.

Warning signs have been posted at all entrances to the active portion of the facility stating "Danger Hazardous Waste Area - Unauthorized Personnel Keep Out". These signs must be in English, Spanish, and any other language that predominates in the area. All lettering must be visible from at least 25 feet.

J&B Enterprises has also prepared a security plan for transportation of hazardous materials. This security plan is required as per the DOT HM 232 regulations, issued by the U.S. Department of Transportations Research and Special Programs Administration. Based upon the regulations and information gathered from companies and others involved in the shipment and carriage of hazardous materials, the following are suggested elements of a security plan that was put in place by September 25, 2003. It is important to remember that a critical step in developing a security plan is the assessment of risk.

18. FACILITY INSPECTIONS (22 CCR 66265.15)

The facility and all equipment (processing, safety, and emergency) must be inspected on a regular basis to identify malfunctions, operator errors, or discharges that may be causing a release to the environment or a threat to health.

J&B has a written schedule for inspecting all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to prevent, detect, or respond to environmental or human health hazards.

The inspection schedule must specify the types of problems to be looked for. The inspection frequency may vary for each of the items, but must be frequent enough to prevent an incident or hazard.

The minimum inspection frequencies for some items are mandated in the regulations:

1. Tanks used for hazardous waste must be inspected daily when in use
2. Hazardous waste loading/unloading areas must be inspected daily when in use
3. Hazardous waste container areas must be inspected at least once per week

4. Other specific requirements exist, as specified in 22 CCR 66265.16(b)(4)

Any problems discovered during the inspections must be remedied in such time that a human or environmental health hazard does not occur. If such a hazard has already occurred, this remedy must take place immediately!

All inspections must be recorded in a log which must be retained on-site for at least three years, and which must include:

1. Date and time of inspection
2. Inspectors name
3. Observations made
4. Date and nature of any repairs or remedial actions

See the Facility Inspection Plan for details, including inspection logs and instructions.

19. EMERGENCY RESPONSE PLANS

The facility maintains an Emergency Response and Contingency Plan, and all employees are required to be familiar with it. Emergency response training includes a thorough review of the Emergency Response and Contingency Plans. They will also become familiar with the location and the use of the emergency equipment. A copy of the Emergency Response and Contingency Plan is kept in the front office, and is available for review by any employee at any time. You are required to know where it is kept. See the Emergency Response and Contingency Plan (ERP) at the end of this document.

20. FORKLIFT SAFETY TRAINING

Forklift safety training includes a thorough review of the written forklift safety program; as well as a performance test. All forklift operators will be given an initial training and then re-trained every three years at a minimum. Training will consist of watching the forklift training video/CD, a test, and an evaluation by the trainer, or by attending a class conducted by a qualified trainer.

21. INTRODUCTION TO INDUSTRIAL TOXICOLOGY AND HYGIENE

A training audio/visual and/or discussion of basic toxicology and related hygienic practices and key concepts are given to train employees. The terms and specific hazardous substances and wastes at the facility are discussed in detail with all of the employees and can be found in this document. The basic terms and concepts are reviewed with employees on an annual basis to ensure their familiarity with these.

While employees are not required to be expert on toxicology, the employees must have a general knowledge and understanding of the following concepts and terms:

Toxic Response mechanism
- Dose/Response relationship
- Dose = Concentration X duration
- Degree of Toxicity
- Threshold level

Routes of Entry
- Inhalation
- Skin/eye contact
- Ingestion
- Good hygiene practices
- Poisoning
- Remote/local effects

Types of Toxic Effects
- Acute effects
- Chronic effects

Acute Effects
- Simple asphyxiation - Nitrogen and Carbon dioxide gas
- Chemical asphyxiation — cyanide and carbon monoxide
- Anesthetics — isopropanol and other organic solvents
- Neurotoxin — lead and mercury
- Irritants — formaldehyde, ammonia, and chlorinated solvents
- Corrosives – acid and caustic (alkaline)
- Allergenic sensitizers – e.g. nickel and copper compounds

Chronic Effects
- Carcinogenic — causes cancer — formaldehyde and hexavalent chromium
- Mutagenic — genetic alteration - 2-aminoanthracene
- Teratogenic — developmental abnormalities/birth defects - lead, alcohol, cocaine
- Reproductive toxic (Pb) — effects reproductive systems - lead
- Specific organ toxic — some chlorinated solvents cause liver damage

Regulation of Occupational Exposures
- LD/LC 50
- TLV/PEL/STEL/TLVc
- IDLH

Exposure Prevention Techniques
- Personal protective equipment
- Good hygiene principles
- Engineering controls — use of the exhaust and ventilation systems

- Know the toxicities of the materials being handled
- Know how to read labels, MSDS's, and written operating procedures

Physical Hazards
- Flammable liquid
- Combustible liquid
- Flammable gas
- Compressed gas
- Oxidizer
- Organic peroxide
- Water reactive
- Unstable
- Explosive

In addition, a review of the following basic practices of Industrial Hygiene is given, employees must observe the following:

- DO NOT eat, drink, smoke, apply lip balm or cosmetics, or handle contact lenses anywhere in the processing, furnace, scrap storage, or receiving rooms.

- DO NOT bring food, drink, or smoking materials into any of the above listed areas.

- Always wash after handling chemicals, and before going to the bathroom, eating, drinking, or smoking or touching your face or eyes.

- If your clothes are contaminated do not bring them home, but rather leave contaminated clothing in a container in the changing room and notify your supervisor.

Also remember these basic rules of Personal Protective Equipment use:

- Always examine all personal protective equipment before use to ensure an absence of holes, rips, or other damage before using each time. Any damaged personal protective equipment must be replaced prior to use!

- Always decontaminate all personal protective equipment after use and leave in the work area. It is very important that personal protective equipment not be worn out of the work area in order to prevent contamination of surfaces in the common areas, such as the lunchroom. Never remove used personnel protective equipment from the work area unless it is packaged for disposal or cleaning.

22. DOCUMENTATION OF TRAINING

Training will be documented by using sign-up sheets, which will be completed for each training session completed. The training documentation will have the type of training given, the topics covered, the date completed, who attended, and who provided the training, and the amount of training time included. Initial or refresher training may be conducted either in-house or by outside services, so long as it is provided by qualified trainers.

APPENDICE – TRAINING UNIT TIME ESTIMATE

INITIAL 24-HOUR HAZWOPER TRAINING, WITH ADDITIONAL JOB SPECIFIC TRAINING FOR SOME JOB POSITIONS

The following are the approximate time needed to complete the 24 Hour Hazardous Waste Operator (Haz Woper) training. There may be an additional 8-16 hours of facility specific training for some job specific training needs, such as emergency coordinators, forklift operators, and so on.

SECTION		Hours
INTRODUCTION		0.5
1.1	EMPLOYEE INFORMATION AND TRAINING	0.5
1.2	JJOB TITLES, DESCRIPTIONS, AND TRAINING	0.5
2.	CONTAINER LABELING	1.5
3.	MATERIAL SAFETY DATA SHEETS	2
4.	LIST OF HAZARDOUS SUBSTANCES/PROP 65 LIST	1
5.	HAZARDOUS NON-ROUTINE TASKS	0.5
6.	HAZARDOUS SUBSTANCES IN UNLABELED PIPES	0.5
7.	INFORMING CONTRACTORS	0.5
8.	CHEMICAL SEGREGATION GUIDELINES	1.5
9.	WORKING WITH CYANIDE	1.5
10.	ACCIDENT PREVENTION	1.5
11.	USE OF RESPIRATORS AND SAFETY GEAR	1.0
12.	HAZARD COMMUNICATION	2
13.	RCRA TRAINING AND OTHER HAZ WASTE REGULATIONS	4
14.	DRIVER TRAINING	5.5
15.	PROCEDURES FOR PROCESSES USED	1.5
16.	WASTE ANALYSIS PLAN	3.5
17.	FACILITY SECURITY	0.5
18.	FACILITY INSPECTIONS	0.5
19.	EMERGENCY RESPONSE AND CONTINGENCY PLANS	5
20.	FORKLIFT SAFETY TRAINING	3
21.	INTRO. TO INDUSTRIAL TOXICOLOGY AND HYGIENE	1.5
TOTAL HOURS		40

ANNUAL 8-HOUR HAZWOPER REFRESHER TRAINING

8-Hour OSHA Haz Woper Refreshing Training is completed on an annual basis. Approximate time allotted for each section of the Annual Refresher Training:

SECTION		Minutes
1.	INTRO. 29 CFR 1910.120 AND FACILITY TRAINING	5
1.	SITE SECURITY PLAN REVIEW	15
2.	CONTAINER LABELING	15
3.	MATERIAL SAFETY DATA SHEETS	30
4.	LIST OF HAZARDOUS SUBSTANCES/PROP 65 LIST	5
5.	HAZARDOUS NON-ROUTINE TASKS	10
6.	HAZARDOUS SUBSTANCES IN UNLABELED PIPES	5
7.	INFORMING CONTRACTORS	5
8.	CHEMICAL SEGREGATION GUIDELINES	15
9.	WORKING WITH CYANIDE	30
10.	ACCIDENT PREVENTION	30
11.	USE OF RESPIRATORS AND SAFETY GEAR	20
12.	HAZARD COMMUNICATION	20
13.	RCRA TRAINING	20
14.	DRIVER TRAINING	60
15.	PROCEDURES AND PROCESSES USED AT FACILITY	30
16.	WASTE ANALYSIS PLAN	15
17.	FACILITY INSPECTIONS	15
18.	EMERGENCY RESPONSE AND CONTINGENCY PLANS	60
19.	FORKLIFT SAFETY TRAINING (every 3 years only)	15
20.	REVIEW INDUSTRIAL TOXICOLOGY AND HYGIENE	60
TOTAL TIME		**8 Hours**

Refresher training consists of a review of the above topics from training manual and consists of approximately eight hours of training materials. Note that each year the annual training covers these topics and one or more are selected for an additional, more detailed focus in order to more thoroughly cover the topic and to keep the training from becoming too monotonous. In addition, training may be completed by a qualified outside service, so long as the above topics are covered and the facility specific needed training is taken care of. (This may require an additional, shorter follow-up session.)

Reference and Training Materials

North American Emergency Response Guidebook
J&B Enterprises Emergency Response and Contingency Plan
J&B Enterprises Operation Plan
Compliance Solutions "8-Hour Hazwoper Annual Refresher"
Compliance Solutions "24-Hour Hazwoper Annual Refresher"
49 Code Federal Regulations (49 CFR), "Transportation, Parts 100 - 185"

Slides/Video/Other media (optional materials used in support of training)

Forklift Safety Training
Lock Out/Tag-out (Control of Energized Sources)
Introduction to Toxicology
Confined Space Entry Requirements
Toxicology, What You Don't Know Can Hurt You!
Hazardous Materials – Small Spill Response
Working With Hazardous Materials - Basics

ATTACHMENT 1 - Hazardous Materials: Potassium Cyanide Safe Handling Guideline

Department: Chemical and General Safety
Program: Hazardous Materials
Chemical Name/Class - Potassium cyanide
Synonyms - Potassium salt of hydrocyanic acid

Reactivity and Physical Concerns
Incompatible with acids; reaction will produce highly toxic hydrogen cyanide gas. Moisture may also release cyanide gas. In addition to toxicity, hydrogen cyanide is also flammable. Potassium cyanide itself is not flammable but may explode if heated above 450° C with chlorates or nitrites.

In case of a fire in the presence of cyanides, do not use carbon dioxide extinguishing agents. Reaction between cyanides, carbon dioxide and water (moisture) can liberate hydrogen cyanide. Use dry chemical extinguishers or copious amounts of water.

Exposure Hazards/Routes of Exposure

Inhalation, ingestion, skin and/or eye contact

May be fatal if swallowed, inhaled, or absorbed through skin. Contact with acids liberates poisonous hydrogen cyanide gas. Contact with mucous membranes or concentrated solutions may cause burns to skin, eyes, and respiratory tract. Affects blood, cardiovascular system, central nervous system, and thyroid.

Exposure may cause headache, weakness, dizziness, labored breathing nausea and vomiting, which can be followed by weak and irregular heart beat, unconsciousness, convulsions, coma and death. Ingestion may result in bitter almond odor that may noted on the breath or vomit.

Chronic Exposure
Prolonged or repeated skin exposure may cause rash and nasal sores.

First Aid
In case of cyanide poisoning, remove victim to a safe area and start first aid treatment immediately, then get medical attention. Trained emergency response personnel should administer a cyanide antidote kit (amyl nitrite, sodium nitrite and sodium thiosulfate).

Actions to be taken in case of cyanide poisoning should be planned and practiced before beginning work with cyanides. A first responder can give oxygen and amyl nitrite before medical help arrives. Allow victim to inhale amyl nitrite for 15-30 seconds per minute until sodium nitrite and sodium thiosulfate can be administered intravenously. A new amyl nitrite ampoule should be used every 3 minutes.

If conscious but symptoms (nausea, difficult breathing, dizziness, etc.) are evident, give oxygen. If consciousness is impaired (non-responsiveness, slurred speech, confusion, drowsiness) or the patient is unconscious but breathing, give oxygen and amyl nitrite by means of a respirator. If not

breathing, give oxygen and amyl nitrite immediately by means of a positive pressure respirator (artificial respiration).

In case of skin contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Contaminated articles of clothing should be treated as hazardous waste.

Exposure Limits

- Permissible exposure limit: 5 mg/m3 (OSHA TWA)
- NIOSH recommended exposure limit: 5 mg/m3 (NIOSH ceiling limit)
- Immediately dangerous to life and health: 25 mg/m3 (as CN)

Exposure Controls/Engineering Controls
Local exhaust ventilation is required. Secondary containment of all storage and use is required if an exposure risk to employees or the environment is present.
Administrative Controls

Job Hazard Analysis and Mitigation (JHAM), Area Hazard Analyses (AHA), and procedures must be developed for all cyanide use applications and should be reviewed and approved by ESH. Depending upon quantities, certain regulatory permits and/or registrations may be required. Personnel working with the materials must receive detailed training on the hazards, safe use, and emergency procedures.

Personal Protective Equipment
Prevent skin/eye contact through the use of impervious gloves, clothing, boots, apron, and eye goggles or full-face shield.

If the airborne exposure limit may be exceeded and engineering controls are not feasible, wear a supplied air, full-face piece respirator, supplied airline respirator, or self-contained breathing apparatus (SCBA) This substance has poor warning properties.

Disposal
Material is regulated as a RCRA hazardous waste. Contact the Waste Management Group for specific disposal requirements and procedures. Containers and other materials that are contaminated with cyanides must also be treated as hazardous waste.
Medical Monitoring (if applicable)
Workers using cyanide may need pre-placement and annual medical exams.

Emergency Response
In the event of a significant release that poses a threat to employees and/or the environment, immediately evacuate the area and notify the emergency operator (9-911). The Palo Alto Fire Department will respond.
Small spills can be cleaned up with appropriate spill response supplies by trained employees who have appropriate and current training to do so.

Standards/Regulations

- OSHA: PEL: 29 CFR 1910.1000, Table Z-1; Respiratory Protection: 29 CFR 1910.134
- EPA: Release: 40 CFR 355.40; Waste: 40 CFR 261.21–261.24
- Uniform Fire Code: Storage and Use: Article 80

Other References

• EPA, Technology Transfer Network Air Toxics Website, "Cyanide Compounds", http://www.epa.gov/ttn/atw/hlthef/cyanide.html 2 Jan 2007 (updated 2 Jan 2007) SLAC-I-730-0A09T-013-R000 2 of 3

Hazardous Materials: Potassium Cyanide Safe Handling Guideline

• NIOSH, International Chemical Safety Card: Potassium Cyanide (ICSC 0671), http://www.cdc.gov/niosh/ipcsneng/neng0671.html

• NIOSH, NIOSH Pocket Guide to Chemical Hazards (NIOSH 2005-151), "Potassium Cyanide", http://www.cdc.gov/niosh/npg/npgd0522.html

2 Jan 2007 (updated 2 Jan 2007) SLAC-I-730-0A09T-013-R000 3 of 3

ATTACHMENT 2

J&B ENTERPRISES

1650 RUSSELL AVENUE
SANTA CLARA, CA 95054

HM 232 DOT SECURITY PLAN

September 25, 2003

Prepared by: John Schultz
California Environmental Management Service Co., Inc.
P.O. Box 390874
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SECURITY PLAN FOR THE TRANSPORTATION OF HAZARDOUS MATERIALS

1. STATEMENT OF PURPOSE

J&B Enterprises has prepared this security plan as required as per the DOT HM 232 regulations, issued by the U.S. Department of Transportations Research and Special Programs Administration. Based upon the regulations and information gathered from companies and others involved in the shipment and carriage of hazardous materials, the following are suggested elements of a security plan that must be in place by September 25, 2003. It is important to remember that a critical step in developing a security plan is the assessment of risk.

J&B Enterprises is committed to the safety and security of our employees, our customers, and the general public. Since the September 11, 2001 terrorist attacks, it has been necessary for everyone, including J&B Enterprises and our employees, to be more vigilant in preventing or inhibiting the use of our products, transportation equipment, and facilities by international and domestic terrorists and by those who might collude with such terrorists. All of J&B Enterprise's employees are asked to help implement this security plan and improve continuously J&B Enterprise's security efforts.

The U.S. Department of Transportation's Research and Special Programs Administration has promulgated regulations (known as "HM-232") that, in part, require that any employee of this J&B Enterprises (including independent contractors) who is a "hazmat employee" be trained and be familiar with J&B Enterprise's security plan. Our understanding of these regulations is that a "hazmat employee" is any person who performs a task or function covered by the Federal Hazardous Materials Regulations ("HMRs").

2. SECURITY RISK ASSESSMENT

J&B Enterprises has collected, reviewed and integrated information about potential security risks as part of its attempt to understand site-specific and route-sensitive risks to security. The assessment identified two main areas of concern and assets.

The Facility

The facility itself present a moderate to serious security threat due the types of materials, both hazardous and non-hazardous, that can be found on site. The non-hazardous materials present the potential threat of armed robbery due to monetary value. The hazardous material threats presented are a remote but not impossible theft of a hazardous material that could be used for a terrorist act.

Routes

A route plan is required for the transportation of all dangerous hazardous wastes or materials. A dangerous hazardous waste or material is any hazardous waste or material that is a concentrated cyanide material or a strong acids or oxidizer that could be used for a terrorist act. All other

routine and low hazard categories of hazardous waste or materials are not subject to a route plan requirement. Examples of these would be "drag-out solutions, scrap electronic components, weak corrosives, heavy metal solutions with very low cyanide levels, and so on.

Examples of "dangerous" hazardous materials or wastes would be any material with a sufficiently high enough concentration of a cyanide or cyanide component that could be used to kill with; strong acids or oxidizers; or flammable liquids. These materials, and any other with like hazards levels, will be subject to a route plan requirements.

3. PERSONNEL SECURITY

J&B Enterprises will implement the following provisions with regard to the employment (including applications for employment) of HAZMAT drivers. Furthermore , J&B Enterprises, at its discretion, may implement some or all of these provisions relevant to the employment of non-driver employees who perform functions regulated by the Federal HMRs.

1. Perform detailed background checks on all applicants for any driver position.
2. To the extent possible, check for criminal convictions.
3. Contact previous employers and references.
4. Investigate gaps in employment.
5. To the extent possible, have at least 10 years consecutive employment/education records.
6. Maintain employee information in a confidential and secure manner, and in compliance with all relevant Federal and State regulations and statutes regarding confidentiality and individual privacy.
7. Verify that drivers are U.S. citizens or that non-citizens have documentation appropriate to their immigration status.
8. Ensure drivers have current CDL with appropriate endorsements and another form of identification (e.g., company-issued credential or current medical certificate.)
9. Collect company identification card and any security materials when a driver/employee leaves J&B Enterprises.
10. Update Company websites and lists, as well as cancel passwords to prohibit computer access by former employees.

4. UNAUTHORIZED ACCESS

1. J&B Enterprises will designate who is in charge of security for J&B Enterprise. The person responsible for this is Mr. Ken Epsman, the Program Administrator.
2. J&B Enterprises will conduct security awareness training for all employees, including how to report suspicious incidents or events.
3. J&B Enterprises will require all visitors and outside vendors to their facility to sign in and/or be given a visitor's badge. Visitors will use the designated parking areas for visitor vehicles at the front of the facility and will be identified before being allowed on the premises. If an unknown visitor does not have an appointment they will be directed to make and appointment before they can be allowed on site or be approved by the program administrator. If the visitor does not immediately depart after being given this information

and being asked to come back later, the Santa Clara Police Department will be immediately called.

4. Designated personnel will perform daily checks and equipment reconciliations.
5. All personnel will remove keys from trucks and truck tractors not in use and have secure key storage when they are off-site.
6. All employees should control access to computers, especially those with product or routing information.
7. J&B Enterprises may request periodic checks of facility areas by local law enforcement, especially when facility is not open. J&B Enterprises will consider professional security force at higher-risk facilities or during elevated threat conditions should they feel that such services might be advisable (e.g., Code Red or Code Orange).
8. J&B Enterprises may develop specific actions for each security level alert that might be set by the Department of Homeland Security ("DHS").
9. J&B Enterprises will post the DHS threat level in drivers' lunch room and other public areas.
10. J&B Enterprises will post and periodically review driver anti-terrorism tips.
11. All employees should be aware of possible points of unauthorized access to Company facilities or buildings.
12. J&B Enterprises may periodically test emergency response communications equipment and procedures. A one time "dummy run" trial will be conducted within 6 months of this document as part of the driver and facility training.

5. EN ROUTE SECURITY

The following are specified directions for all drivers transporting any of the identified dangerous materials from the threat assessment.

1. STAY ALERT!
2. Drivers should lock truck or truck tractor doors at all times and take keys any time the driver is not with vehicle. Ensure windows are closed.
3. Drivers should perform "walk around" inspection of vehicles after every stop, including deliveries and breaks.
4. J&B Enterprises will develop "parking instructions" for any locations away from Company facilities. These instructions will consist of looking for lighted and fenced areas, visibility, and security. If necessary, local law enforcement will be contacted and asked for their advice and services as necessary.
5. J&B Enterprises will attempt to include security considerations in route selection and times for pick up and delivery.
6. Driver "down-time" should be minimized while en route. Schedule as few stops as possible.
7. J&B Enterprises will establish procedures to communicate emergency messages to all facilities and to drivers on the road. J&B Enterprises will include communications procedures for drivers to report any unexpected occurrence with equipment, load, or route.
8. Drivers (and other knowledgeable employees) should not discuss any details about their load or pick-up points and destinations with unauthorized personnel, such as over the CB

radio or at truck stops. Cells phones will be the preferred choice of en route communication, if necessary.

9. Drivers will not pick up hitchhikers or allow any unauthorized personnel in the truck cab.
10. Drivers should not stop to help disabled vehicles or motorists. Call local authorities and notify them of anyone needing assistance. Be suspicious of motorists trying to get the driver to pull over for an "alleged" traffic accident. Be especially suspicious of vehicles with three or more people in them.
11. J&B Enterprises will develop a procedure for detecting "late loads." J&B Enterprises will investigate any late load more than an hour late for a delivery.
12. Drivers should not change delivery destination unless authorized.
13. J&B Enterprises will develop a procedure for drivers when being asked to pull over by law enforcement or unmarked vehicles.
14. All employees are to report any suspicious events to J&B Enterprises and local law enforcement. Any suspected load tampering will be immediately reported to 911.
15. If there is an emergency situation, contact 911 immediately.
16. Don't allow yourself to be distracted by others during the loading/unloading.
17. Review the FMCSR pocketbook regarding attendance and surveillance of motor vehicles.

6. ROAD RAGE AND THREATENING DRIVERS

In the event of a driver having and accident or a hostile encounter, the drivers will respond as follows, regardless of who is at fault:

1. Apologize and not engage in an argument.
2. If possible, try to defuse the anger by offering to give the angry driver J&B Enterprises telephone number or offering to call the police on your cell phone, give your name, and tell stem who they can file a complaint with at J&B.
3. Apologize again and drive off.
4. Do not argue, do not get in fight. Be aware that the other person could be armed and dangerous. Leave the scene. If you get in a fight, you can be fired.
5. Make note of the vehicles license plate number, a general description of the driver and the car, and what occurred immediately after you have left the area. Call in the incident on your cell phone immediately. See "Reporting Threats and Incidents".

7. REPORTING THREATS AND INCIDENTS

The following information would be helpful to note when reporting any threats or incidents:

1. Description of the vehicle(s): Please describe all observations about the truck- size, color, markings, as well as license, registration, and other pertinent identifying information. If your cell phone is equipped with a camera, you can take a picture.

2. Description of the truck's contents: What is the truck carrying, and in what quantity?

3. Description of the event or observation:

- When did the event occur?
- Where did the event occur?
- What direction did the truck head?
- Describe the individual(s) operating the vehicle?
- Did the individual(s) involved in the event say anything about what they were doing or where they intended to go?
- Additional suspects involved, i.e. supporting surveillance vehicle.

8. GENERAL SECURITY AWARENESS

1. Any employee or visitor making unusual or repeated requests for sensitive or important Company-related information or threats of any kind must be report immediately.
2. Any person asking a driver to make any unauthorized movement (pick-up and delivery) for cash.
3. Any person or group loitering outside J&B Enterprises facility or outside a clients facility that does not appear to be normal or "right". (Drive on and call the facility and ask them to take a look and, if necessary, report it to the police.)
4. Any person claiming to be a representative of a utility (gas, water, electric) but cannot produce company identification. (Ask all such visitors for identification cards with photos. Verify with a phone call if necessary.)
5. Any person carrying a weapon, such as a gun or knife. (Report to the police.)
6. After hours, any vehicle driving by J&B Enterprises facility with the lights off. (Report to t he police.)
7. Any occupied vehicle parked outside J&B Enterprises facility – especially if the vehicle has been sitting for a long period or after normal work hours. (Report to the police.)
8. Any unfamiliar vehicle that appears to be abandoned near J&B Enterprises facility. (Report to the police.)

9. HM 232 DOT SECURITY PLAN IMPLEMENTATION AND MAINTENANCE

This program will be reviewed on an annual change to read 'periodic' basis and or to read as "modified as necessary", as part of the annual facility training. The responsibility for implement and maintaining this program is that of the Program Administrator, Ken Epsman. Should there be any deficiencies or needed changes, please advise us; your input is important and needed.

Ken Epsman

ATTACHMENT 3

J&B ENTERPRISES
1650 RUSSELL AVENUE
SANTA CLARA, CA 95054

FACILITY INSPECTION PLAN AND SCHEDULE

Rev. December 14, 2007

Prepared by: John Schultz
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P.O. Box 390874
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650.966.1526

INTRODUCTION

The following is the J&B Enterprises Facility Inspection Plan (FIP) with schedule. The FIP will be meet the following requirements:

Title 22 §66264.15. General Inspection Requirements,
Title 22 §66264.175 Containment and
Title 22 §66264.195 Inspections

1. The owner or operator shall inspect the facility for malfunctions and deterioration, operator errors, and discharges that may be causing or may lead to:

a. release of hazardous waste constituents to the environment; or

b. a threat to human health. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

2.

a. The owner or operator shall develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.

b. The owner or operator shall keep this schedule at the facility.

SCHEDULE

The Facility Inspections will be conducting on the following basis: Daily, Weekly, Monthly, and Post Incident (or special inspection).

Note: A general comment; there are no automatic feed or monitoring systems used at the facility to detect overflow or leaks from materials stored or handled there. All waste feed is done my manual operation using a drum pump or other portable pump and an operator. This system is designed and appropriate for the facility use since containers received on site primarily consist of 55-gallon drums or occasional, small portable containers. Therefore, since there are no automatic feed or monitoring systems, these are not included in the inspection. Should such devices or systems be installed, a possible HWF Permit modification would most likely be required before such could be installed and the systems would most likely require engineering and permit review.

Note: The secondary containment systems have been engineered and designed to meet the requirements of Title 22 §66264.175 Containment requirements. These systems consist of having bases that are free of cracks, gaps, and tears; are sufficiently impervious to the materials that are to be contained within the secondary containment system, are sloped or otherwise designed to drain and remove any materials contained therein; and have sufficient capacity to contain any precipitation that may accumulate; and be able to cope with any run-on. In addition, any spilled or leaked materials must be cleaned up immediately upon detection and properly disposed of.

The following schedule was developed to meet the requirements of the above referenced sections of the regulations. Therefore daily, weekly, and monthly inspections are mandatory. In addition, special inspection may be warranted due to a spill, release, or other emergency; there are special inspection guidelines attached.

There are no automatic feed or monitoring systems used, therefore, the manual filling and emptying of tanks require an operator *in attendance* during these operations. There are no leak detection systems, but a daily inspection and an attendant are required for filling and emptying tanks and containers.

There are no cathodic protection systems used or needed for the equipment or operations at the facility, and therefore no testing or inspection of these types of systems is necessary. There are no impressed current systems used at the facility either, and no monitoring or testing is needed for these.

A. Daily Inspections

A designated waste inspector or inspectors will complete daily inspections. The purpose of the daily inspection is to check those areas used on a daily basis to store, treat, or handle hazardous wastes as the daily activities are more likely to result in a spill or release than those areas identified for Weekly or Monthly Inspection.

There are two designated inspectors, one to complete the inspection and the other to provide backup for when the other is not available. The facility operator and the office manager will also provide monitoring and backup of the inspectors to insure that the inspections are completed. A "Daily Self-Inspection Log" form will be completed by each time by an inspector (see the attached "Daily Self-Inspection Log for specific inspection detail) with the following information indicated on the form:

1. The date and time of the inspection
2. Who completed the inspection (it must be signed by the inspector)
3. The area, containers, tanks, and/or equipment inspected
4. What to look for in each area or piece of equipment to be inspection
5. And any other inspection listed on the form to be completed
6. Any remedial action needed

The areas to be inspected are the Gold Processing Room, the Strip Area, the Solder Dross Storage Area, and the shipping and receiving area where these materials are being loaded and unloaded.

Inspectors will look for signs of spills, leaks, or releases; inspect labeling; general cleanliness of containers, tanks, floors, and secondary containment structures. They will also look for any other unsafe condition that needs to be brought to the attention of management, including any deterioration, or degradation, corrosion or impairment of the secondary containment or tank systems and their coatings, or linings.

A copy of the inspection will be kept on hand and available for inspection. The facility inspection forms will be kept for a minimum of three years, per regulatory requirement.

B. Weekly Inspections

A designated waste operator or operators will complete weekly inspections. The purpose of the weekly inspection is to check those areas used on a less regular basis to store, treat, or handle hazardous wastes. These are areas more likely to result in a spill or release than those of a Monthly Inspection are, but less likely than those of the daily inspection areas.

There are two designated inspectors, one to complete the inspection and the other to provide backup if the other is not available. The facility operator and the office manager will also provide monitoring and backup of the inspectors to insure that the inspections are completed

A "Weekly Self-Inspection Log" form will be completed by each inspector (see the attached "Weekly Self-Inspection Log for specific inspection detail) with the following information indicated on the form:

1. The date and time of the inspection
2. Who completed the inspection (it must be signed by the inspector)
3. The area, containers, tanks, and/or equipment inspected
4. What to look for in each area or piece of equipment to be inspection
5. And any other inspection listed on the form to be completed
6. Any remedial action needed

Inspectors will look for signs of spills, leaks, or releases; inspect labeling; general cleanliness of containers, tanks, floors, and secondary containment structures. They will also look for any other unsafe condition that needs to be brought to the attention of management, including any deterioration, or degradation, corrosion or impairment of the secondary containment or tank systems and their coatings, or linings.

A copy of the inspection will be kept on hand and available for inspection. The facility inspection forms will be kept for a minimum of three years, per regulatory requirement.

C. Monthly Inspections

A designated waste operator will complete monthly inspections. The purpose of the monthly inspection is to check those areas used on a less regular basis to store, treat, or handle hazardous

wastes or equipment which present the least likely hazard of a spill or release than that of a Daily or Weekly Inspection. Tom Stilson and Jim Hague are the two designated inspectors. Barbara Clark and Ken Epsman will provide monitoring of the inspectors to insure that the inspections are completed.

A "Monthly Self Inspection Log" form will be completed by each inspector (see the attached "Monthly Self-Inspection Log for specific inspection detail) with the following information indicated on the form:

1. The date and time of the inspection
2. Who completed the inspection (it must be signed by the inspector)
3. The area, containers, tanks, and/or equipment to be inspected
4. What to look for in each area or piece of equipment to be inspection
5. And any other inspection listed on the form to be completed
6. Any remedial action needed

Inspectors will look for signs of spills, leaks, or releases; inspect labeling; general cleanliness of containers, tanks, floors, and secondary containment structures. They will also look for any other unsafe condition that needs to be brought to the attention of management, including any deterioration, or degradation, corrosion or impairment of the secondary containment or tank systems and their coatings, or linings.

A copy of the inspection will be kept on hand and available for inspection. The facility inspection forms will be kept for a minimum of three years, per regulatory requirement.

D. Special Inspection Considerations - Post Incident/ Search and Rescue

A post incident or special inspection may be made in any of the following conditions:

1. If there is a spill or release of any sort (other than minor or routine spills);
2. If there is any sign of a dangerous or potentially dangerous condition;

3. If there has been an incident that could pose a dangerous or potentially dangerous situation (e.g. such as an unidentified odor or smell, a swollen or leaking drum or tank, a fire, earthquake, flood, or other disaster);

4. Or if there is an accident or if there is any reason to think that an inspection should be made for reasons of safety or because there may be a negative environmental impact or impairment.

There is no pre-set, scheduled, regular or pre-determined Post Incident or Special Inspection schedule or log form; these inspections are conducted on an as needed basis and in a manner as the situation dictates.

In the event that a Post Incident (or special inspection) is needed, the facility Emergency Response and Contingency Plan (ERP) and its specific procedures will be consulted. The Emergency Coordinators will oversee the inspection. The Search & Rescue procedures will be strictly adhered to during any post-disaster facility inspection, including inspection for any deterioration, or degradation, or impairment of the secondary containment systems, their coatings, or their linings. The reporting and recording requirements of the ERP will be reviewed and completed as needed.

E. Missing Personnel or Post Incident Inspection - Guideline

In the event an incident or if someone is missing after an event, the situation must be immediately reported to the Emergency Coordinators. Should there be a major, area-wide disaster, such as an earthquake or explosion or other unforeseeable event, it may be necessary to conduct a special facility inspection and/or conduct a search and rescue if the local emergency response agencies are unavailable or if time is critical. In such an event, the Emergency Coordinators will do the following:

REMEMBER! – CYANIDE IS USED AT THIS FACILITY AND CAN GENERATE A HYDROGEN CYANIDE GAS THAT CAN BE LETHAL! KEEP THIS IN MIND FOR ALL EMERGENGY RESPONSE ACTIONS.

1. Make an independent confirmation of the incident, or that an employee is missing and then try to determine needs are to be addressed and/or where the missing employee was last seen. Try to determine if they are off-site or if they are still in the building or on the premises.

2. If the employee still cannot be located, the Emergency Coordinators will immediately report that an employee is missing to the fire department or other public service emergency responders.

3. No Emergency Coordinator or employee will re-enter the facility without first completing a hazard assessment appropriate to the condition of the building and areas to be searched. In other words, no search of ANY area will be conducted without first assessing all risks (such as fume, vapor, fire hazard, structural collapse, or other hazardous exposure etc.) and having the appropriate personal protective safety gear needed to do so.

   PLEASE NOTE! The fire department is equipped with Level 1 and Level 2 personal protective gear, and has extensive training in conducting searches and should be the first choice for a search and rescue mission! However, in a natural disaster, such as an earthquake, the public safety agencies may not be available or able to respond in a timely fashion. It may then be necessary for facility personnel to organize and respond as best as possible.

4. Only after it has been determined that the building can safely be re-entered (after a hazard assessment has been performed), may the search and rescue proceed. A pre-entry safety meeting to formulate an entry plan based on the hazard(s) identified will be held. There must

also be an "exit plan" detailing when and how and under what conditions search and rescue personnel will leave the building once the actual search has begun. Only personnel properly briefed and equipped, and who will adhere to the plan, will participate in the search. The plan will have the following specific elements:

a. A 'buddy system' will be used, whereby two people (preferably an emergency coordinator and another person) will partner up and stay in line of sight of each other at all times.

b. If possible, at least one member of each team will have a cell phone or other portable communication device (i.e. radio) and will remain in constant contact with an outside coordinator at all times. If this is not possible, the team will keep a member within visual and hearing range of the emergency coordinators.

c. Entry and exit points will be selected for the closest entry to the area where the missing person(s) are suspected of being or where the incident occurred, and personnel will be posted to monitor these entry and exit points.

d. A 'search plan', specifying rooms and locations to be searched by each team will be designated, and a time of entry to a time of exit will be selected. (In other words, a time in and a time out will be pre-established and adhered to).

e. No one, absolutely no one, will deviate from the plan without outside coordination and awareness.

f. At the first sign or indication of a potential hazard or risks, such as smoke, odor, fume, mist, vapor, dust, suspicion of imminent collapse, fire, aftershock or secondary earthquake, or any suspect circumstance, all search team members will immediately re-evacuate the building and report back to the emergency coordinator and be accounted for. If the search team is ordered out of the building for any reason, get out immediately!

   REMEMBER: It is too easy for emergency responders to get caught up in the excitement of an emergency and endanger themselves and other personnel, thus adding to the danger and confusion. It is essential to be calm and as thorough as possible in your planning. Do not add complication to the situation and do not, under any circumstances, endanger your selves or deviate from the plan or undertake any unnecessarily dangerous actions! KEEP YOUR PLAN SIMPLE! The fire department is better equipped, better trained, and ready to deal with serious situations and is to be the first responder in every case if at all possible.

Thank you for your cooperation. As you can see, an organized, thought out plan is essential to good safety. Employee compliance to the emergency evacuation plan is required, and not an option. We consider this Plan a serious and necessary plan, and it is for our mutual safety.

F. Reporting Requirements/Actions Regarding Discovery

The in-house inspector is to *immediately* notify the facility owner/operator or the designated emergency
Coordinators regarding the discovery of any non-routine spills, releases, or for any tank or container
overfill, and to *immediately* take whatever measures possible to mitigate the situation ***that can be done in a safe manner. If it is not safe, they are to do nothing and to call 911.*** All unauthorized or non-routine spills will be immediately cleaned up only so long as it is safe to do so.

Upon discovery of any cracks, gaps and/or tears in the secondary containment systems, coatings, or membranes, these too shall be reported to the facility owner/operator or the designated emergency coordinators as required by the HWFP, Part II.4, Special Conditions, (i.e. the Hazardous Waste Facility Permit). Any cracks, gaps and/or tears in any of the containment systems, tanks, or containers, will be immediately repaired and entered into the inspection log which will be annotated that the repair was completed, how the materials was recovered and disposed of, and by who and when.

Should any spill, release, or overflow not be contained by the secondary containment or an impervious surface, or go off-site, or require the activation of a designated emergency response, the Santa Clara Fire Department will be immediately notified. In the event that there is any kind of situation deemed dangerous, the situation will be immediately reported to the Santa Clara Fire Department.

Attached:

Facility Inspection Record Forms

STANDARDIZED PERMIT APPLICATION

SECTION VII – INSPECTION PLAN

For

J&B ENTERPRISES
CAD982052797

July 2011

SECTION VII

INSPECTION PLAN

INTRODUCTION

The following is the J&B Enterprises Facility Inspection Plan (FIP) with schedule. The FIP is required by Title 22 §66264.15. See the General Inspection Requirements, Title 22 §66264.175 Containment, and Title 22 §66264.195 regarding Facility Inspections.

1. The owner or operator shall inspect the facility for malfunctions and deterioration, operator errors, and discharges that may be causing or may lead to:

   a. Release of hazardous waste constituents to the environment; or

   b. A threat to human health. The owner or operator shall conduct these inspections sufficient to identify problems in time to correct them before they harm human health and/or the environment.

2. The owner or operator shall develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental and/or human health hazards.

3. The owner or operator shall keep this schedule at the facility.

SCHEDULE

The Facility Inspections will be conducted on the following basis: Daily, Weekly, Monthly, and Post Incident (or special inspection).

Note: There are no automatic feeds or monitoring systems used at the facility to detect overflow or leaks from materials stored or handled there. All waste feed is performed manually by an operator using a drum pump or other portable pump. This system is designed, and appropriate, for the facility use since containers received on site primarily consist of 55-gallon drums or occasional, small portable containers. Therefore, since there are no automatic feeds or monitoring systems, these are not included in the inspection.

Note: The secondary containment systems have been engineered and designed to meet the specifications of Title 22 §66264.175 containment requirements. These systems consist of bases that are free of cracks, gaps, and tears; are sufficiently impervious to the materials that are to be contained within the secondary containment system, are sloped or otherwise designed to drain and remove any materials contained therein; have sufficient capacity to contain any precipitation that may accumulate; and be able to cope with any run-on. In addition, any spilled or leaked materials must be cleaned up immediately upon detection and properly disposed of.

The following schedule was developed to meet the requirements of the above referenced sections of the regulations. The daily, weekly, and monthly inspections are mandatory. In addition, special inspection may be warranted due to a spill, release or other emergency.

There are no automatic feeds or monitoring systems used, therefore, the manual filling and emptying of tanks require an operator *in attendance* during these operations. There are no leak detection systems, but a daily inspection and an attendant are required for filling and emptying tanks and containers.

There are no cathodic protection systems used or needed for the equipment or operations at the facility, and therefore no testing or inspection of these types of systems is necessary. There are no impressed current systems used at the facility either; so no monitoring or testing is needed for these.

A. Daily Inspections

A daily inspection will be completed when the facility is open and the waste process units are being used. A designated waste inspector or inspectors will complete the daily inspections. The purpose of the daily inspection is to check those areas used on a daily basis to store, treat, or handle hazardous wastes as the daily activities are more likely to result in a spill or release than those areas identified for Weekly or Monthly Inspection.

A daily inspection is an inspection that will be conducted when the facility is in operation or when any process units are in use. J&B's normal operations are Monday through Friday, excepting holidays or other days that the facility is closed. If the facility operates on weekends or on holidays or after hours, then a daily inspection will be completed on those process units that are in use.

Means: There are, at a minimum, two designated inspectors; one to complete the inspection and the other to provide backup for when the other is not available. The facility operator and the office manager will also provide monitoring and backup for the inspectors to insure that the inspections are completed.

For each inspection, a "Daily Self Inspection Log" form will be completed by an inspector (see the attached "Daily Self-Inspection Log" for specific inspection detail). The following information is indicated on the form:

1. The date and time of the inspection
2. Who completed the inspection (it must be signed by the inspector)
3. The area, containers, tanks, and/or equipment inspected
4. What to look for in each area or piece of equipment to be inspection
5. And any other inspection listed on the form to be completed
6. Any remedial action needed

Areas to be inspected: the Solder Dross Storage Area (S001), the Gold Processing Room and Shipping/Receiving Area where these materials are being loaded and unloaded (S002), and the Strip Area. The Waste Treatment Areas (S003 and S005), while not used on a regular or daily basis, *when in operation*, must be inspected on a daily basis.

Inspectors will look for signs of spills, leaks or releases, inspect labeling, and check the general cleanliness of containers, tanks, floors, and secondary containment structures. They will also look for any other unsafe condition that needs to be brought to the attention of management, including any deterioration, or degradation, corrosion or impairment of the secondary containment or tank systems and their coatings, or linings. The inspectors will make note of their findings on the forms and report any of these that cannot immediately be corrected and then follow-up to ensure that they have been corrected within one week.

Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 requires that "In the event that there are any cracks, gaps or tears detected in the dedicated secondary containment for any Hazardous Waste Container Storage or Treatment Area (e.g. the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed) repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

A copy of the inspection will be kept on hand and available for inspection. The facility inspection forms will be kept for a minimum of three years, per regulatory requirement.

B. Weekly Inspections

A designated waste operator or operators will complete weekly inspections. The purpose of the weekly inspection is to check those areas used on a less regular basis to store, treat or handle hazardous wastes. These are areas more likely to result in a spill or release than those under Monthly Inspection, but less likely than those requiring daily inspection areas.

There are two designated inspectors, one to complete the inspection and the other to provide backup if the other is not available. The facility operator and the office manager will also provide monitoring and backup for the inspectors to insure that the inspections are completed.

For each inspection, a "Weekly Self-Inspection Log" form will be completed by each inspector (see the attached "Weekly Self-Inspection Log" for specific inspection detail). The following information is indicated on the form:

1. The date and time of the inspection
2. Who completed the inspection (it must be signed by the inspector)
3. The area, containers, tanks, and/or equipment inspected
4. What to look for in each area or piece of equipment to be inspection
5. And any other inspection listed on the form to be completed
6. Any remedial action needed

Inspectors will look for signs of spills, leaks, or releases; inspect labeling; general cleanliness of containers, tanks, floors, and secondary containment structures. They will also look for any other unsafe condition that needs to be brought to the attention of management, including any deterioration, or degradation, corrosion or impairment of the secondary containment or tank systems and their coatings, or linings. The inspectors will make note of their findings on the forms and report any of these that cannot immediately be corrected and then follow-up to ensure that they have been corrected within the week.

Areas to be inspected: the Furnace Room, the Outside Storage Shed (S004), the Exterior Yard (empty drum and equipment storage areas), the Emergency Response Equipment (including the fire extinguishers in S001, S002, S003, S004, S005), and both trucks. See the log for additional details.

As required by the Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Areas, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days f discovery of the problem, delineating what was done to correct the problem." [if you make edits to this paragraph from previous page – page 3 – cut and paste in here.]

A copy of the inspection will be kept on hand and available for inspection. The facility inspection forms will be kept for a minimum of three years, per regulatory requirement.

C. Monthly Inspections

A designated waste operator will complete monthly inspections. The purpose of the monthly inspection is to check those areas used on a less regular basis to store, treat or handle hazardous wastes or equipment which present the least likely hazard of a spill or release than that of a Daily or Weekly Inspection. Tom Stilton and Jim Hague are the two designated inspectors. Barbara Clark and Ken Penman will provide monitoring of the inspectors to insure that the inspections are completed.

For each inspection, a "Monthly Self-Inspection Log" form will be completed by each inspector (see the attached "Monthly Self-Inspection Log" for specific inspection detail). The following information is indicated on the form:

1. The date and time of the inspection
2. Who completed the inspection (it must be signed by the inspector)
3. The area, containers, tanks, and/or equipment to be inspected
4. What to look for in each area or piece of equipment to be inspection
5. And any other inspection listed on the form to be completed

6. Any remedial action needed

Inspectors will look for signs of spills, leaks, or releases; inspect labeling; general cleanliness of containers, tanks, floors, and secondary containment structures. They will also look for any other unsafe condition that needs to be brought to the attention of management, including any deterioration, or degradation, corrosion or impairment of the secondary containment or tank systems and their coatings, or linings. . The inspectors will make note of their findings on the forms and report any of these that cannot immediately be corrected and then follow-up to ensure that they have been corrected within the week.

As required by the Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Are, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days f discovery of the problem, delineating what was done to correct the problem."

A copy of the inspection will be kept on hand and available for inspection. The facility inspection forms will be kept for a minimum of three years, per regulatory requirement.

D. Special Inspection Considerations - Post Incident/ Search and Rescue

A post incident or special inspection may need to be made in any of the following conditions:

1. If there is a spill or release of any sort (other than minor or routine spills);
2. If there is any sign of a dangerous or potentially dangerous condition;
3. If there has been an incident that could pose a dangerous or potentially dangerous situation (e.g. such as an unidentified odor or smell, a swollen or leaking drum or tank, a fire, earthquake, flood or other disaster);
4. Or if there is an accident or if there is any reason to think that an inspection should be made for reasons of safety or because there may be a negative environmental impact or impairment.

There is no pre-set, scheduled, regular or pre-determined Post Incident or Special Inspection schedule or log form; these inspections are conducted on an as needed basis and in a manner as the situation dictates.

In the event that a Post Incident (or special inspection) is needed, the facility Emergency Response and Contingency Plan (ERP) and its specific procedures will be consulted. The Emergency Coordinators will oversee the inspection. The Search & Rescue procedures will be strictly adhered to during any post-disaster facility inspection, including inspection for any

deterioration, degradation or impairment of the secondary containment systems, their coatings, or their linings. The reporting and recording requirements of the ERP will be reviewed and completed as needed.

As required by the Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Are, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days f discovery of the problem, delineating what was done to correct the problem."

E. Missing Personnel or Post Incident Inspection - Guideline

In the event an incident or if someone is missing after an event, the situation must be immediately reported to the Emergency Coordinators. Should there be a major, area-wide disaster, such as an earthquake or explosion or other unforeseeable event, it may be necessary to conduct a special facility inspection and/or conduct a search and rescue if the local emergency response agencies are unavailable or if time is critical. In such an event, the Emergency Coordinators will do the following:

REMEMBER! – CYANIDE IS USED AT THIS FACILITY AND CAN GENERATE A HYDROGEN CYANIDE GAS THAT CAN BE LETHAL! KEEP THIS IN MIND FOR ALL EMERGENGY RESPONSE ACTIONS.

1. Make an independent confirmation of the incident and then try to determine the needs to be addressed. If an employee is missing , determine where the missing employee was last seen. Try to verify if they are off-site or if they are still in the building or on the premises.

2. If the employee still cannot be located, the Emergency Coordinators will immediately report that an employee is missing to the fire department or other public service emergency responders.

3. No Emergency Coordinator or employee will re-enter the facility without first completing a hazard assessment appropriate to the condition of the building and areas to be searched. In other words, no search of ANY area will be conducted without first assessing all risks (such as fume, vapor, fire hazard, structural collapse, or other hazardous exposure etc.) and having the appropriate personal protective safety gear needed to do so before proceeding.

PLEASE NOTE! The fire department is equipped with Level 1 and Level 2 personal protective gear, and has extensive training in conducting searches and should be the first choice for a search and rescue mission! However, in a natural disaster, such as an earthquake, the public safety

agencies may not be available or able to respond in a timely fashion. It may then be necessary for facility personnel to organize and respond as best as possible.

Only after it has been determined that the building can safely be re-entered (after a hazard assessment has been performed), may the search and rescue proceed. A pre-entry safety meeting to formulate an entry plan based on the hazard(s) identified will be held. There must also be an "exit plan" detailing when and how and under what conditions search and rescue personnel will leave the building once the actual search has begun. Only personnel properly briefed and equipped, and who will adhere to the plan, will participate in the search.

The plan will have the following specific elements:

a. A 'buddy system' will be used, whereby two people (preferably an emergency coordinator and another person) will partner up and stay in line of sight of each other at all times.

b. If possible, at least one member of each team will have a cell phone or other portable communication device (i.e. radio) and will remain in constant contact with an outside coordinator at all times. If this is not possible, the team will keep a member within visual and hearing range of the emergency coordinators.

c. Entry and exit points will be selected for the closest entry to the area where the missing person(s) are suspected of being or where the incident occurred, and personnel will be posted to monitor these entry and exit points.

d. A 'search plan' specifying rooms and locations to be searched by each team will be designated, and a time of entry to a time of exit will be selected. (In other words, a time in and a time out will be pre-established and adhered to.)

e. No one, absolutely no one, will deviate from the plan without outside coordination and awareness.

f. At the first sign or indication of a potential hazard or risks, such as smoke, odor, fume, mist, vapor, dust, suspicion of imminent collapse, fire, aftershock or secondary earthquake, or any suspect circumstance, all search team members will immediately re-evacuate the building and report back to the emergency coordinator and be accounted for. If the search team is ordered out of the building for any reason, get out immediately!

REMEMBER: It is too easy for emergency responders to get caught up in the excitement of an emergency and endanger themselves and other personnel, thus adding to the danger and confusion. It is essential to be calm and as thorough as possible in your planning. Do not add complication to the situation and do not, under any circumstances, endanger your selves or deviate from the plan or undertake any unnecessarily dangerous actions! KEEP YOUR PLAN SIMPLE! The fire department is better equipped, better trained, and ready to deal with serious situations and is to be the first responder in every case if possible.

Thank you for your cooperation. As you can see, an organized, thought out plan is essential to good safety. Employee compliance to the emergency evacuation plan is required, and not an option. We consider this Plan a serious and necessary plan, and it is for our mutual safety.

F. Reporting Requirements/Actions Regarding Discovery

The in-house inspector is to *immediately* notify the facility owner/operator or the designated emergency coordinators regarding the discovery of any non-routine spills, releases, or for any tank or container overfill, and to *immediately* take whatever measures possible to mitigate the situation *that can be done in a safe manner. If it is not safe, they are to do nothing and to call 911.* All unauthorized or non-routine spills will be immediately cleaned up only as long as it is safe to do so.

Upon discovery of any cracks, gaps and/or tears in the secondary containment systems, coatings, or membranes, these too shall be reported to the facility owner/operator or the designated emergency coordinators as required by the HWFP, Part II.4, Special Conditions of the Hazardous Waste Facility Permit. Any cracks, gaps and/or tears in any of the containment systems, tanks, or containers, will be immediately repaired and entered into the inspection log which will be annotated that the repair was completed, how the materials were recovered and disposed of, and by who and when.

Should any spill, release, or overflow not be contained by the secondary containment or an impervious surface, or go off-site, or require the activation of a designated emergency response, the Santa Clara Fire Department will be immediately be notified. In the event that there is any kind of situation deemed dangerous, the situation will be immediately reported to the Santa Clara Fire Department. The inspectors will immediately report any problems that cannot immediately be corrected and then follow-up to ensure that they have been corrected within one week.

Attached: Facility Inspection Forms

Attachment 1

FACILITY INSPECTION LOGS

July 2011

S001 - DAILY INSPECTION LOG FOR SOLDER DROSS STORAGE AREA

Inspector:_____ **Date:**_____**Time:**_____

Inspect the fire extinguisher by the door. Is it there and is it charged?

Are any hazardous wastes stored in this room, except for solder dross? Is the area clean? If there are wastes other than solder dross, correct by removing and placing these other wastes to their correct storage location.

All solder dross container labels must be visible and there must be a 5-foot aisle space between rows (and anything else stored here). Are all solder dross containers located in the designated and marked storage area? Is the marking legible? If not, note and correct.

Are all hazardous waste containers properly sealed? Do all hazardous waste containers have a properly completed – and visible - EPA Hazardous Waste Label? If not, note and correct.

Are there any signs of spilled solder dross or oxide residue? If so, make a note and then clean it up.

A single container of sodium hydrosulfite is permitted to be stored in this room by the Santa Clara Fire Department, Hazardous Materials Division. This container may be stored here, but not within the designated solder dross storage area itself and must be 5 feet from the solder. Is the sodium hydrosulfite outside of the solder dross storage area?

Are there any filters, pumps, hoses or other similar equipment present that do not belong in this area? If so, note and remove to the proper location within the maintenance cage or other appropriate area.

Are all the solder dross drums stored in the marked area and are the marking (the yellow lines) clearly visible? If not, note and correct.

Remedial actions taken *: _____

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Date and time corrected and person responsible: _____

* Note! Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Area, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

S002 - DAILY INSPECTION LOG FOR SHIPPING/RECEIVING, DRUM STORAGE, AND GOLD PROCESSING ROOM

Inspector:_____ **Date:**_____**Time:**_____

Inspect the following permitted treatment units: T1 - T6 (the precipitation tanks, 1 – 6), EW1, EW2, and EW3 (the electrowinning units, 1 – 3), C1 and C3 (concentrators units 1 and 3, note: unit C2 is not in use), the Acid/Wash Unit (the fume hood), the Evaporator, and all drums and containers being stored in the Gold Recovery Room. Also inspect the secondary containment floor/containment system and the loading/unloading area.

Is this area clean? Are there any acid (pH 4 or less) or other incompatible materials in this room that do not belong in here (except for mildly acidic Iodine Etch and the approved gold plating solutions and acid wash material)? If necessary, correct.

Are any concentrators, precipitation, electrowining tanks, or the evaporator leaking or fuming? Are filters, pumps, hoses, or other similar equipment present in good shape and not leaking? If so remove from use and report them until they can be repaired or replaced.

Is the acid/fume hood operational, and are only approved or compatible materials there? Do any of the process tanks, waste containers, or pumps and associated piping show signs of cracks, damage, leaking, or deterioration? If so, note and correct.

Are all process tanks and cyanide material/waste containers labeled with product identity and Poison warning stickers? Do all hazardous waste containers have a properly completed EPA Hazardous Waste label and are these visible? If not, note and correct.

Is there sufficient access space (5 feet aisle space) between rows of drums, tanks, and other equipment stored in this area, including the fire extinguisher and eyewash/shower? If not, note and correct.

Have all empty chemical containers triple rinsed such that no chemical residues remain? In addition, is all old product identity and chemical hazard labeling removed or obscured? If not, note and correct by rinsing and removing labels and then moving to empty drum storage.

Are there any signs of deterioration to the epoxy coating of the floor or the berms? Are there other signs of peeling, gaps, cracks or corrosion to the coating of the secondary containment? Remedial actions taken *: _____

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Date and time corrected and person responsible: _____

* Note! Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Area, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

DAILY INSPECTION LOG FOR STRIP TANKS AND STRIP AREA

Inspector:_____ **Date:**_____**Time:**_____

Area to inspect; both strip tanks and an area of 25 feet immediately around them.

Are these areas clean? Are any hazardous wastes stored in this room that have a pH of <5? If so, describe and arrange to have them **immediately** removed and stored properly.

Are any filters, pumps, hoses, or other similar equipment present that are in bad shape? If so note and correct by removing from use and move to the maintenance area for repair or replacement.

Are there any signs of a chemical leak or spill from the tanks? If so report and cleanup.

Do either or the strips tanks, waste containers, or pumps and associated piping show signs of cracks, damage, or deterioration? If so, note and correct.

Are the strip tanks and cyanide material/waste containers labeled with product and tank identity and appropriate warning stickers? If not, note and correct.

Do all hazardous waste containers have a properly completed EPA Hazardous Waste label? If not, note and correct with the proper labeling.

Is the exterior (outer) secondary containment tank of the strip tanks in good shape? Are there any signs or cracks, leaks, or damage? Inspect the containment tank by opening the port and looking in. This must be dry, if not report it and take the tank out of operation.

Is there sufficient access space (5 feet aisle space) between rows of empty drums, tanks and other equipment stored in this area? If not, note and correct.

Is the eyewash/shower and are fire extinguishers accessible (not blocked) and clean and ready for use?

Remedial actions taken * _____

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Date and time corrected and person responsible: _____

* Note! Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Area, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

S003 and S005 - DAILY INSPECTION LOG FOR WASTE WATER TREATMENT AREA AND EXTERIOR STORAGE

Inspector:_____ **Date:**_____**Time:**_____

Inspect the fire extinguisher by the door. Is it there and is it charged?

Is this area clean? Are there any signs of chemical spills or leaks in this area, or signs of damage, corrosion, or deterioration of containers, drums, tanks, or the floor? Check the secondary containment berms, the cone tanks, hoses, pumps, filter press and the collection sump of the floor. Are these in good shape and not leaking? If not, remove from use and report these. Are the tanks and containers labeled?

Are there any signs of hazardous waste containers or incompatible wastes that do not belong here, or process tank or filter press degradation or corrosion? If so note, report it, and than correct.

Are there any unsealed or unlabeled hazardous waste containers? If so, note and correct.

Are the acids, caustics, and oxidizer separated and stored in the appropriate, designated locations (in S003) and is all labeling complete?

Are there any signs of deterioration to the epoxy coating of the floor or the berms? Are there other signs of significant peeling, gaps, cracks or corrosion to the coating of the secondary containment?

Remedial actions taken *: _____

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Date and time corrected and person responsible: _____

* Note! Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Area, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

WEEKLY INSPECTION LOG FOR FURNACE ROOM

Inspector:_____ **Date:**_____**Time:**_____

Inspect the fire extinguisher by the door and is it charged?

If the oxygen tanks are not in use, are the valves shut? If not, make a note and then shut them.

Turn on the room exhaust and ventilation and check to see that they work. If the do not work, report them and have them repaired.

Is this area clean? Are there any signs of chemical spill around the furnaces or other pieces of equipment here?

Are there any hazardous waste containers or equipment showing signs of degradation, deterioration or excessive corrosion? Be sure to inspect the furnaces; inspect the fittings, valves, and gas lines. Do they appear to be in good shape? If not, describe the problem and take them out of use until they can be repaired.

Are the labels visible on hazard material containers? Are there any unsealed or unlabeled hazardous waste or hazardous materials containers? If so, report these and then either close them or re-label them as necessary.

Remedial actions taken *: _____

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Date and time corrected and person responsible: _____

* Note! Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Area, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

S004 - WEEKLY INSPECTION LOG FOR OUTSIDE STORAGE SHED AND GENERAL FACILITY EXTERIOR YARD (Empty drum storage, yard, and stored equipment)

Inspector:_____ **Date:**_____**Time:**_____

Prior to entering the shed (S004), check to ensure that it is locked, If not, make a note and be sure to lock it after the inspection. Are all containers and the storage shed labeled and clean? Is the shed clean and free of deterioration?

Are there any signs of a chemical spill or leak or impairment in the shed or yard? If so describe. Check the secondary containment sump & the walls of the shed, as well as the exterior drain plug and the area surrounding the outside of the shed for degradation.
Are there any unsealed hazardous waste or hazardous materials containers, in the shed? If so, close these and report this.

Yard/Empty Drum Storage
Is there a label "Empty Drum Storage"? Are all containers empty and triple rinsed, such that no chemical residues remain? Are all old labeling removed? Are all empty containers stored with bungs and lids sealed and stored on their sides or upside down? If not, note and correct.

Are all empty tanks stored upside down or on their side, or turned over or covered so they do not accumulate rainwater? If not, note and correct.

Is combustible trash removed from the empty drum storage area and yard? Is the area clean? If not, note and correct.

Is there sufficient access space between rows of empty drums, tanks, bins, and other equipment stored outside for safe access? If not, note and correct.

Are the storm drains and grounds free of any signs of oil or chemical residues or stains?

There should be no outdoor storage of any hazardous waste containers (loaded vehicles for transportation are excepted). If so, remove and place in proper storage and report it.

Remedial actions taken *: _____

_____

_____

Date and time corrected and person responsible: _____

* Note! Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Area, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

WEEKLY INSPECTION LOG FOR FACILITY EMERGENCY RESPONSE EQUIPMENT

Inspector:_____ **Date:**_____**Time:**_____

Are all of the portable fire extinguishers in S001, S002, S003, S004, and S005, labeled and fully charged? If not, note and then remove from service and replace. (Call the fire extinguisher service if needed.)

Is the fire hose properly stored in the maintenance area?
Are the Emergency Number Contact lists posted and do they contain current information? If not, note and correct.

Is the emergency shower/eyewash in S002 and Stripping working and is access unobstructed? (Run the eyewash water until it runs clear.) If not, note and correct.

Is the following emergency response equipment labeled, on-site, and available for immediate use? If not, note and replace any missing or defective items or labeling. The spill kit should contain the following items:

1-Recovery Drum – used to store spill response materials and for repacking wastes
1-Open Top Drum – used for storing spilled materials and used absorbent
6-50 Pound Bags of Chemical Absorbent – cleanup material
1-Plug-n-Dike - used to plug leaks
4-Splash Shield and Goggles - personal protection equipment (PPE)
2-Chemical Resistant Clothing, Including Boots and Gloves- (PPE)
1-Heavy Duty Plastic Sheeting, 10' x 10' – used for decon, sealing drain, covering
5-Heavy Duty Trash Can Liners (4 mil) – used for placing absorbent, other used
1-Duct Tape – used for sealing PPE, bags, other uses
1-Push Broom, Shovel, Dust Pan – used for cleaning up
1-Garden Hose - used for decon, fire control, and cleanup
1-pH Paper and/or Portable pH Meter – used to determine pH value (corrosives) and to confirm neutralization.

Is the area clean and accessible where the spill kit is stored?

Remedial actions taken *: _____

_____

_____

_____

Date and time corrected and person responsible: _____

* Note! Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Area, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

MONTHLY (AND DAILY) EMPTY TANK INSPECTION LOG – S001, S002, S003, S004, S005

INSPECTION INSTRUCTIONS: This is a special inspection log for any used processing tank(s) temporarily or permanently taken out of operation for whatever reason and placed into storage. This inspection shall be completed on a monthly basis at a minimum. *NOTE: The strip tank operators will use this form for daily strip tank records.* This inspection form applies only to tanks that have been used and not to any new tanks that have not been installed or used previously. This form may be used for more than one tank; identify the tank or tanks this applies to.

Inspector:_____ **Date:**_____**Time:**_____

Tank ID(s):_____

Applies to the following tanks: Strip (S1, S2), Evaporator (E1), Concentrator (C1, C3), Electrowinning (EW1, EW2, and EW3), all Precipitation (T1 – T6), and Waste Water Treatment Tank (WTS1 and WTS2)

Is the indicated process tank free of cracks, corrosion, or other signs of damage or deterioration? If not, note and correct.

Are the indicated process tank and its associated secondary containment clean and decontaminated? If not, note and correct.

If the tank(s) is being stored outdoors, is it raised off the ground and being stored upside down or on its side (if possible) or is covered with a tarp or plastic to prevent rainwater accumulation? If there is rainwater collected, report and remove it to waste treatment for disposal.

Remedial actions taken *: _____

_____

_____

_____

_____

_____

Date and time corrected and person responsible: _____

* Note! Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Area, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

MONTHLY INSPECTION LOG FOR EMERGENCY EYEWASH/SHOWER

Inspector:_____ **Date:**_____**Time:**_____

Inspect the Eyewash and Showers in the S002 and the Strip Room and complete this form on a monthly basis.

Is the area clean? Is the emergency eyewash clean & free of significant deterioration and corrosion?

_____

_____

Is the emergency shower/eyewash functional and access unobstructed? If not, note and correct.

_____

_____

Test Eyewash Function: Run the eyewash until the water is clear.

Does the rinse-water flow freely and do the two streams meet in the center?

_____

_____

Does the water wash stream appear clean? Note: At least once a month, run the eyewash until water runs clear.

_____

_____

Remedial actions taken *: _____

_____

_____

_____

_____

_____

Date and time corrected and person responsible: _____

* Note! Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Area, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

WEEKLY INSPECTION LOG FOR VEHICLE EMERGENCY RESPONSE EQUIPMENT

Inspector:_____ **Date:**_____**Time:**_____

Is the following emergency response equipment located in each of the two waste hauling vehicles and available for immediate use? If not, note and correct.

Recovery Drum
2-50 Pound Bags of Chemical Absorbent
Plug-n-Dike
Splash Shield And Goggles
Chemical Resistant Clothing, Including Boots and Gloves
Heavy Duty Plastic Sheeting
Heavy Duty Trash Can Liners (4 mil)
Duct Tape
Push Broom, Shovel, Dust Pan
Garden Hose
PH Paper and/or Portable pH Meter
Water (at least 1 gallon)

Remedial actions taken *: _____

_____
_____
_____
_____
_____

Date and time corrected and person responsible: _____

* Note! Hazardous Waste Facility Permit (HWFP), Part II, Special Conditions, No. 4 states that "In the event that there are any cracks, gaps, or tears detected in the dedicated secondary containment for the Hazardous Waste Container Storage Area, the Concentrator Tanks (C1-3), the Precipitation Tanks (T1 – T6), the Evaporator (E-1), the Electrowinning Tanks (EW 1-3), the Acid/Water Wash Unit, the Wastewater Treatment System, and the Hazardous Waste Storage Shed, repairs shall be initiated as soon as possible and completed within one week of discovery of the problem. The Permitted (J&B Enterprises) shall notify DTSC within twenty-four (24) hours whenever containment problems are found and notify DTSC in writing within seven (7) days of discovery of the problem, delineating what was done to correct the problem."

7/13/11 13:36

SECTION VIII

CONTINGENCY PLAN

STANDARDIZED PERMIT APPLICATION

SECTION VIII – CONTINGENCY PLAN

For

J&B ENTERPRISES
CAD982052797

July 2011

SECTION VIII – CONTINGENCY PLAN

J&B Enterprises has an emergency response and contingency plan for emergency response and preparedness. This plan has been developed to meet the regulatory requirements of Title 22 66264.30 and local hazardous materials regulations. The plan has been developed to reflect the specific needs of the facility and the employees working there.

The plan includes a system for communication that involve cells phone and telephone, fire fighting media, including fire extinguishers and fire sprinklers, ventilation and lighting systems with a back up power generator, secondary containment systems impervious to the waste being handled, spill control and decontamination equipment, and employee training.

Arrangements have been made with local authorities, the Santa Clara Fire Department, Hazardous Materials Division, and the facility has designated emergency coordinators. The employees are familiar with reporting requirements and emergency response procedures.

Attached

J&B Enterprises, Emergency Contact List, May 2009 (1 page)
J&B Enterprises, Emergency Response and Contingency Plan, July 2010 (36 pages)

Attachment 1

EMERGENCY RESPONSE AND CONTINGENCY PLAN

J & B Enterprises
1650 Russell Avenue
Santa Clara, CA 95050

July 22, 2010

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I. INTRODUCTION

The purpose of this plan is to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden releases, or threatened releases[1] of hazardous materials. The provisions of this plan must be carried out immediately whenever there is a fire, explosion, release, or threatened release of hazardous materials and/or wastes, or any other incident, which could threaten human health or the environment.

The following organizations have been sent the information listed.

1. Hazardous Materials Management and Emergency Response Plans, Material Safety Data Sheets: Santa Clara Fire Department

2. Prior letter of Intent to Establish Formal Arrangements:

Santa Clara Police Department
Santa Clara Valley Medical Center
Chemical Emergency Planning Response Commission (CEPRC)
Local Emergency Planning Commission (LEPC)

Whenever any of the information changes, the organizations listed above are sent updated information immediately. See Section XIII of this plan entitled Amendment of Emergency Response Plan for details.

Primary Police and Fire Departments
The Santa Clara Fire and Police Departments are the designated primary emergency response agencies, and they can be reached by dialing **911**.

Spill Clean-up Services
The following companies are available to provide secondary emergency spill response clean-up services in the event of a release, or threatened release, of hazardous materials and/or wastes beyond the capacity of the in-house spill team to respond to. The decision to contact an outside spill response contractor will be made by the Emergency Coordinator in conjunction with the primary emergency response agency following a review of the situation, as described in Section VIII, *Chemical Spill Emergency Response Procedures*.

Spill contractors: Clean Harbor, San Jose 408.451-5000

II. EMERGENCY COORDINATORS DUTIES

There is at least one of the designated facility Emergency Coordinators, either on-site, or on call, at all times. The Emergency Coordinators are responsible for the direction and coordination of all emergency measures, as described herein. The current list of Emergency coordinators is identified in Attachment 1.

---

[1] A threatened release exists whenever warning signs that a release may occur in the future are present. Examples of warning signs include, but are not limited to; unexplained leaks or spills, bulging or swollen containers or tanks, corroded or otherwise significantly damaged containers or tanks, smoke, fire, heat, unusual fumes, or gas generation.

Emergency Coordinators have the authority to direct company resources in the event of an emergency. This includes the authority to evacuate the facility, to utilize and purchase equipment and materials, and to contract with outside services and response agencies including police, fire, and clean-up crews.

All of the designated facility Emergency Coordinators are familiar with the following:

a. The Emergency Response Plan
b. The location and characteristics of the hazardous materials and wastes on-site
c. The layout of the facility
d. The operations and activities of the facility
e. The location of all records within the facility
f. The emergency shutdown procedures
g. A general knowledge of the Hazardous Waste Control Laws, as they effect emergency response activities.

This is accomplished by providing a combination of in-house and outside training to the Emergency Coordinators whose duties do not familiarize them with these areas.

General Procedures and Priorities in the Event of an Emergency

1. The Emergency Coordinators' *order of priorities* in any emergency is as follows:

a. Ensure human health and safety
b. Safeguard the environment, wildlife, and livestock
c. Preserve and prevent damage to property
d. Preserve and protect company property

2. The Emergency Coordinator must notify company personnel as necessary to obtain aid and ensure human safety. The Emergency Coordinators must always immediately evacuate the area of an emergency or accident if any possibility for further injury exists (see evacuation procedures). The Emergency Coordinator must also notify appropriate emergency response agencies and services, as described in this plan.

3. In the event of an accident involving the release, or threatened release, of a hazardous material, the Emergency Coordinator must immediately identify the character, exact source, amount, and extent of the release (or threat thereof), and must immediately notify the Santa Clara Fire Department at 911!

4. The Emergency Coordinator must assess possible hazards to human health and the environment that may result from the emergency or accident. This includes an assessment of any indirect effects, such as would result from the run-off of contaminated solutions.

If it is determined that such hazards exist, the Emergency Coordinator must immediately notify any response agencies whose help may be needed and any agencies that are required to be notified as to the nature of the event. (See Section III – Reporting Requirements) for additional details.

Local Primary Emergency Response:

Santa Clara Fire and Police Departments Emergency number	**911**
California Office of Emergency Services	**800.852-7550**

Secondary Spill Clean-up Contractors: Clean Harbor, San Jose 408.451-5000

The reports must include the following items:

a. Name, address, telephone number of the facility owner/operator
b. Name, address, telephone number of the facility
c. Date, time, and type of incident
d. Name and quantity of material(s) involved
e. The extent of any injuries
f. An assessment of actual or potential hazards to human health or the environment where this is applicable
g. An estimate of the quantity and disposition of recovered material that resulted from the incident

5. The Emergency Coordinator must ensure that fires, explosions, and hazardous materials and/or waste releases do not occur, recur, or spread. Actions required may include:

a. Shut down of operations
b. Containment of hazardous materials
c. Shut down of utilities
d. Notification of outside emergency response agencies and services, and/or coordination of the in-house emergency response team.

See Section X for the location and shut down procedures of utility mains. Employees working with chemicals are trained in how to stop the flow of materials in their area and how to shut down operations in the event of an emergency. The Emergency Coordinator will direct employees when to shut down and when to start up.

6. The Emergency Coordinator will use facility personnel to contain and clean-up hazardous materials spills only facility personnel are properly trained and equipped for the characteristics of the incident. *If there is any possibility that facility personnel are not adequately trained and equipped to respond to a particular emergency situation, they may not cleanup and the Emergency Coordinator must call for professional help.*

7. In the event of a fire, explosion, or hazardous materials release (or threatened release thereof), the Emergency Coordinator must monitor for leaks, pressure build-ups, gas generation, or rupture in valves, pipes, or other equipment, wherever there is a possibility of these problems occurring.

8. After the emergency is under control, the Emergency Coordinator must:

a. Immediately provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from the incident, in accordance with all federal, state, and local regulations

b. Ensure that no materials that are incompatible with any released materials are treated, stored, or disposed of, until clean-up procedures are completed

c. Ensure that all emergency equipment is cleaned or replaced and is fit for use before operations are resumed. See Attachment 3 for the log form used for this purpose.

d. Prior to resuming operations, notify the Fire Department and the Department of Toxic Substances Control that the facility has accomplished 8. a, b, and c.

9. Within 15 days of the incident the Emergency Coordinator must record the incident in the Operating Log and submit an incident report to the Fire Department, Office of Emergency Services, and to the Department of Toxic Substances Control, which includes the following:

a. Name, address, telephone number of the facility owner/operator
b. Name, address, telephone number of the facility
c. Date, time, and type of incident
d. Name and quantity of material(s) involved
e. The extent of injuries(if any)
f. An assessment of any actual or potential hazards to human health or the environment
g. An estimate of the quantity and disposition of recovered material that resulted from the incident (if any)

10. Within 30 days of the incident the Emergency Coordinator must submit an Emergency Release Follow-Up Notice to the Chemical Emergency Planning and Response Commission (CEPRC) at 2800 Meadowview Road, Sacramento, CA 95832. This report must be filed using the *Emergency Release Follow-Up Notice Reporting Form,* a copy of which appears in Attachment 5.

III. REPORTING REQUIREMENTS

The Santa Clara Fire Department is the local emergency response agency and they must be contacted IMMEDIATELY in the event of any emergency situation at: 911. In addition, the following agencies must also be notified, as indicated below.

Hazardous Materials and/or Waste Spill

Santa Clara Fire Department **911**	
Office of Emergency Services	800.852.7550
Santa Clara County Environmental Health Department	408.918.3400

Air Borne Hazard

BAAQMD	415.771.6000
Santa Clara Fire Department **911**	

Groundwater, Storm Drain, or Other Public Water Contamination

Regional Water Quality Control Board	510.622.2300

Hazard to a Public Waterway - National Response Center (Coast Guard) 800.424.8802

Hazard to Wildlife or Its Environment - Department of Fish & Game 650.631-7730 or 911

Discharge to the Sewer System

San Jose/Santa Clara Water Pollution Control Plant, emergency	408.945.3000

Industrial Related Injury Requiring Hospitalization

Cal/OSHA Industrial Relations Division	510-794-2521

Hazardous Materials Spill on Public Highway - California Highway Patrol 911

Hazardous Materials Spill on City Streets or County Roads

Santa Clara Police Department	911
Santa Clara Sheriff Department	911

For assistance with all of the above - California Environmental Management Service Co. 650.966.1526

Incident reports, an incident report as per Section II.9, must contain the following information:

1. Name and phone number of the person reporting.
2. Name and address of the facility.
3. The type of accident.
4. The time of the accident.
5. The extent on any injuries.

6. The type and amount of any chemical(s) involved.
7. The possible hazards to humans and the environment both inside and outside the facility.

The Emergency Coordinator who is at the scene of the incident must remain available to aid the responding officials.

In addition, a report must be submitted to the Fire Department, Office of Emergency Services, Department of Toxic Substances Control, and County Office of Environmental Health within 15 days of the incident, which includes the following information:

1. Name, address, telephone number of the facility owner/operator
2. Name, address, telephone number of the facility
3. Date, time, and type of incident
4. Name and quantity of material(s) involved
5. The extent of injuries(if any)
6. An assessment of any actual or potential hazards to human health or the environment
7. An estimate of the quantity and disposition of recovered material that resulted from the incident (if any)

A written follow-up report must also be submitted within 30 days of the incident to the Chemical Emergency Planning and Response Commission (CEPRC) at 2800 Meadowview Road, Sacramento, CA 95832. This report must be filed using the "*Emergency Release Follow-Up Notice Reporting Form*", a copy of which appears in Attachment 5.

Any releases, or threatened releases, that meet the following criteria must be IMMEDIATELY reported to the Fire Department even if they do not pose a threat to human health or the environment:

1. The discharge is not contained in secondary containment or by a rigid aboveground structure until it is cleaned up.
2. It takes longer than 8 hours to clean up.
3. It causes a deterioration of the secondary containment or rigid aboveground surface.
4. It causes an increase in the hazard of fire or explosion, or produces flammable or toxic gases.

A <u>RECORDABLE DISCHARGE</u> is any discharge, which meets all of the following criteria:

1. It is from primary containment to secondary containment or to a rigid above ground surface covering that can contain the discharge until it is cleaned up.
2. The permittee can and does clean up the discharge within eight hours and before it escapes from the secondary containment or above ground surface covering.
3. It causes no increase in the hazard of fire or explosion, no production of flammable or poisonous gas, and no deterioration of the secondary containment or rigid above ground surface.

Any spill meeting these requirements must be immediately cleaned up and noted in the Recordable Discharge Log. See Attachment 2 for a copy of the Recordable Discharge Log.

IV. COMMUNICATIONS AND ALARMS SYSTEMS

J & B Enterprises has the following alarm systems:

* Fire/Smoke/and Heat
* Burglar

In the event of a fire or burglary the alarm is tied into a company that will notify the fire or police department automatically. This company is an independent 24-hour per day, 365 days per year alarm monitoring service. Smoke and heat detectors are located throughout the rooms, on the ceiling.

There are two pull alarms. These are located next to the outside and inside doors of the process room. The communication system consists of five telephones one located in each office, one in the break room and two in the process room.

In case of fire or cyanide gas release, or threatened release:

* Pull the fire alarm.
* Yell "Fire" or "Evacuate" to the other persons in the building.
* Dial **911**, if possible from the building or from the neighboring building or cell phone and explain the situation to the fire department.

V. EVACUATION PROCEDURES

Emergency Coordinator, or the pull fire alarms announce evacuations. When an evacuation is announced, employees are to stop work, shut down equipment as necessary, and go to the closest available exit. **All employees must leave the facility and report to the designated**

assembly area, located in front of the building at the Russell Avenue entrance. Do not run, but hurry. Do not linger in entranceways or driveways, stay together in the assigned assembly area. Follow these procedures:

1. Stay calm, think, avoid panic and confusion.
2. Stop what you are doing. If there is time, shut off any equipment you are operating. Leave by the nearest outdoors exit if safe.
3. Do not lock any doors as you leave.
4. In case of an emergency proceed to the nearest exit in a quick but cautious manner. Persons requiring medical attention should be moved out of immediate danger.
5. Do not assist in fire control. Keep out of the way, stay clear of the facility and do not interfere with emergency operations.
6. Move upwind to the designated assembly area, located in front of the building, along Russell Ave. If the prevailing wind is not blowing from the north as is typical, the meeting area will be in the direction upwind of the building, along Russell Ave. **Do not leave the area until directed by an Emergency Coordinator.**
5. If it is safe, the Emergency coordinators will stay behind to shut down plant operations.
6. Wait for instructions from your Emergency coordinator. Do not re-enter building unless you are told it is safe by an emergency coordinator.
7. The emergency coordinator will count all employees at the meeting place to ensure that no one has been left inside.

It is very important that each employee report outside at the assembly area to Emergency Coordinator so that everyone can be accounted for. The Emergency Coordinator is also responsible for ensuring any guests have been accounted for.

The Emergency Coordinator will notify employees when it is safe to re-enter the facility. Employees are not to re-enter the facility without approval from the Emergency Coordinator.

Evacuation of Neighboring Facilities

The Emergency Coordinator will designate personnel to direct the evacuation of neighboring businesses and establishments should this be required. The Emergency Coordinator will visit neighbors in harms way and inform them of the evacuation and then return to the assembly area.

VI. FIRE AND EXPLOSION PROCEDURES

1. Determine if you or anyone else is injured or in immediate danger. Remove injured persons from any immediate danger. Secure yourself from danger.
2 Call for medical assistance if necessary.
3. Contact an Emergency Coordinator.
4. Call the Fire Department (dial **911**) at once, tell them that there is, or potentially is, the hazard of a chemical fire involving cyanide. This is necessary to ensure that they bring chemical spill response equipment and protective gear.
5. Post someone at entrances to the facility to direct emergency vehicles and to unlock the gate if necessary.
6. The Emergency Coordinator shall institute response actions as required, including fire fighting, facility evacuation, and shutdown procedures.
7. Do not resume any activities unless the Emergency Coordinator directs you to do so, or gives you an all-clear signal.
8. In the event of a fire or explosion, involving or potentially involving, hazardous materials and/or wastes, the Emergency Coordinators and all response personnel shall be aware of the following potential hazards arising from a fire or explosion involving some or all of the chemicals in-use at J & B Enterprises. Additional information on potential chemical hazards appears in the Material Safety Data Sheets, and response personnel must review these before responding to an emergency!

9. Specific chemical hazards associated with the specific chemicals found or used at J&B:

a. **Sodium cyanide and cyanides** - Carbon dioxide based extinguishers can generate Hydrogen cyanide gas, which is extremely toxic and flammable. Contact with acid can also generate Hydrogen cyanide, as can contact with water. Contaminated run-off water may be highly toxic!
b. **Ludigol** - Generates toxic NO_x and SO_x gases and vapors.
c. Nitric acid - Strong oxidizing agent, can ignite combustible items. Generates toxic NO_x and Hydrogen nitrate gases. Contact with water can generate toxic and corrosive fumes.
d. **Hydrochloric acid** - Generates toxic and corrosive Chlorine, hydrochloric acid, and chloride fumes. Can generate explosive hydrogen gas upon contact with metals.
e. **Zinc dust** - Generates explosive hydrogen gas upon contact with water, alkalis, or acid.
f. **Caustic soda** - Generates explosive hydrogen gas upon contact with metals.
g. **Sulfur dioxide** - Generates toxic SO_x gases and vapors.
h. **Acetylene** - Severe explosion hazard! Generates toxic Carbon monoxide. Projectile hazard!
i. **Oxygen** - Strong oxidizing agent, promotes and accelerates combustion. Projectile hazard!
j. **Liquefied Petroleum Gas (LPG)** - Severe explosion and projectile hazard!

k. **Sodium hydrosulfite** - May ignite in contact with water! Generates toxic SO_x, hydrogen sulfide, and mercaptans.

l. **Various Hazardous Wastes** – In addition to the above specific chemicals, J&B also has various and numerous other hazardous waste solutions that contain one or more of the above chemicals and employees need to be aware of this.

VII. EARTHQUAKE OR OTHER UNPREDICTED DISASTER PROCEDURES

1. The greatest immediate danger would be from being struck or crushed by falling/moving objects, or splashed by chemicals. Try to get away from anything that may be able to fall on, or otherwise hurt you. Get away from the strip, concentrator, evaporator, and plate out tanks and hazardous materials and waste storage areas (i.e. get out of the strip room and the gold recovery rooms immediately). If outdoors, stay in the open, away from any trees, structures, power lines, explosion hazards, etc. If indoors, try to get under a desk, table, bench, or in a doorway. Do not try to move during a quake unless it is absolutely necessary.

2. Follow the same procedure as for a Fire or Explosion.

3. Follow the same procedure as for a Chemical Release.

4. Be prepared to shut off the water and gas mains.

5. Be aware that electrical, gas and water lines and mains may be down, broken, and out of order, all of which may constitute hazards.

6. Do not resume any activities unless the Emergency Coordinator directs you to do so, or otherwise gives an all clear signal. The Emergency Coordinator will direct all post-earthquake response activities, until the all clear signal is given.

7. Immediately after the earthquake has ceased, or as soon there after as possible, the Emergency Coordinator will direct a post-earthquake inspection, to detect spills, leaks, and other hazardous conditions. Only personnel who have been trained in chemical safety and spill response procedures may perform the post-earthquake inspections. No one will enter an area suspected of having a hydrogen cyanide gas release, or threatened HCN Gas release. All personnel will wear the following safety equipment while performing these inspections:

a. Goggles or splash shield
b. Gloves
c. Boots
d. Chemically resistant "rain suit"
e. Respiratory protection for toxic dust

8. Any chemical spills or leaks discovered during the post-earthquake inspection must be immediately reported to the Emergency Coordinator who will determine if the spill can be safely contained and collected with available in-house resources, or if an outside spill response agencies must be notified.

9. In the event that the post-earthquake inspection reveals signs of a chemical release, or threatened release, which is, or may be, imminently hazardous to human health, the Emergency Coordinator must terminate the inspection, ensure that the facility has been evacuated, and contact the Santa Clara Fire Department at 911.

10. Facility personnel will follow the procedures specified below when conducting a post-earthquake inspection: Specific Areas of Concern (Due to Hazards)

a. Process Rooms (Stripping and Recovery Room)
Note: These areas contain the cyanide materials in varying concentration; Cyanide is a poison in sufficient concentrations!

Only trained personnel, who have been specifically authorized by the Emergency Coordinator, may perform a post-earthquake inspection in this area. The inspection of this area must involve at least two people to ensure a prompt response in the event of an injury or other emergency situation. Before entering the area the cyanide monitor will be checked to ensure it is working and has not gone off. If the alarm has been triggered this area will not be entered. The inspection of this area must include the natural gas lines for the evaporator and concentrator; as well as the hazardous waste treatment tanks, containers, secondary containment structures, emergency response equipment, and related structures.

Should any significant problems be discovered during the post-earthquake inspection, the Emergency Coordinator will immediately direct appropriate response activities using in-house or outside professional services as necessary. Additional details on spill containment, collection, and residue disposal appears in Section VIII, "Response to Chemical Release".

b. Solder Dross Storage Room
Note: This area contains very heavy stacked containers and pallets contain tin/lead solder dross. These containers and pallets are extremely heavy and could crush and injure or kill if they fall!

Only trained personnel, who have been specifically authorized by the Emergency Coordinator, may perform a post-earthquake inspection in this area. The inspection of this area must involve at least two people to ensure a prompt response in the event of an injury or other emergency situation. The inspection of this area must include both the natural gas lines for the furnaces and the hazardous waste containers.

Should any significant problems be discovered during the post-earthquake inspection, the Emergency Coordinator will immediately direct appropriate response activities using in-house or outside professional services as necessary. Additional details on spill containment, collection, and residue disposal appears in Section VIII, "Response to Chemical Release"

VIII. RESPONSE TO CHEMICAL RELEASE

1. Remove yourself from immediate danger. If necessary, such as during a release, or threatened release, of hydrogen cyanide gas, the Emergency Coordinator will institute Evacuation and Shut Down procedures as described in this document.

2. If there is a release, or threatened release, of hydrogen cyanide gas pull the fire alarm. Yell "Evacuate" to other persons nearby.

3. If it is safe to do so, remove injured persons from immediate danger. It is not safe to enter an atmosphere with toxic levels of hydrogen cyanide gas.

4. If a spill has occurred follow the Spill Response and Leaking Containers, as described in this document.

Leaking Container Procedures

1. If there is a release, or threatened release, to land, water, or air, or if there is a threat to human health, or if there is a spill which is beyond the capability of in-house personnel to safely and quickly clean-up: the emergency coordinator will immediately contact the Santa Clara Fire Department at 911 for assistance.

2. If there is a release, or threatened release to land, water, or air, or if there is a threat to human health the emergency coordinator will follow the procedures outlined for proper notification of the authorities, Section II.

Spill Response Procedures

1. Determine if there are any injuries or if anybody is in immediate danger. Remove injured persons from any further damage. Secure yourself from immediate danger.

2. Call for medical assistance if necessary.

3. Contact an Emergency Coordinator. If an Emergency Coordinator is not immediately available, call the Santa Clara Fire Department at 911.

4. The Emergency Coordinator shall institute response actions as required, including spill containment and collection, and facility evacuation and shutdown procedures, as appropriate. See the LEAKING CONTAINER PROCEDURES for additional details.

5. Only facility personnel who are properly trained, equipped and authorized by the Emergency Coordinator may institute spill containment and clean-up procedures. Do not attempt to handle a spill, which involves hazardous materials and/or wastes without authorization from the Emergency Coordinator. Before attempting any spill containment and/or collection operations, review the Material Safety Data Sheets for the material(s) in question!

6. Do not resume activities unless the Emergency Coordinator directs you to do so, or gives an all-clear signal.

7. Chemical spills and/or leaks must be handled in specific manners as described below:

a. For small spills, follow the procedures listed on the Material Safety Data Sheet.

b. For larger spills outside assistance may be needed, and the Santa Clara Fire Department must be contacted immediately by dialing 911.

c. **Do not attempt to clean up any spill that is emitting hydrogen cyanide gas.** Follow the chemical release procedures for release to air and for emergency evacuation.

d. Spills and leaks which occur inside of secondarily contained areas often do not present material containment problems. In these cases, you must first ascertain the cause of the leak or spill. If it is the result of an on-going leak, efforts must first be taken to control the situation by halting the leak or transferring the materials into another non-leaking container. Once the source of the problem has been corrected, the Emergency Coordinator is free to direct other spill response activities, as described below.

e. Spills and leaks which do not occur in secondarily contained areas - e.g. in the facility parking lot - potentially pose a serious danger of unauthorized hazardous waste discharge. **It is therefore essential that these spills and leaks be contained, prior to attempting to initiate spill collection or treatment activities.** Spill containment can often be accomplished by pouring chemical absorbent around the perimeter of the spill in order to set up a containment dike.

If there is a chance that the spill may enter the storm or sewer drain system, it is essential that these openings be temporarily covered. This can often be accomplished by covering the drain opening with plastic sheeting and then placing sand bags around the perimeter of the sheeting. Any spill or leak which enters the storm or sanitary sewer system, or which moves off-site prior to containment, must be immediately reported to the Fire Department. See Reporting Requirements, Section III for additional details.

The Emergency Coordinator is responsible for ensuring that spills in uncontained areas do not leave the facility. Should the possibility of an unauthorized discharge of hazardous waste appear imminent, the Emergency Coordinator must immediately notify the Santa Clara Fire Department, the in-house spill response team, and/or outside spill response contractors.

f. Once the spill and/or leak has been controlled and contained, the spilled material must be collected, and either used, repackaged, or disposed of as hazardous waste. The method of spill collection is dependent on a number of factors including spill type, volume, and location. If at all possible, the spilled material should be collected in such a manner that it can be reused - e.g. liquids can be pumped into another clean and empty container or back

into their original container (if undamaged) pending reuse. Solids can similarly be swept up and transferred to an undamaged container. Alternatively the spilled materials can be transferred directly to an appropriate process tank, if possible.

Should the spilled material not be reusable it can be collected after solidification with absorbent, or alternatively it can be pumped or vacuumed up, and transferred to a clean hazardous waste drum pending transportation to a permitted off-site TSD Facility for waste treatment/disposal.

g. As always, when responding to a hazardous material and/or waste incident, the emergency responders must be aware that potentially harmful substances may be present, or generated by the incident. Therefore it is essential to continually monitor the immediate area for signs of hazardous chemical reactions by noting any fume or gas generation. If gases or fumes are being generated, personnel are required to immediately evacuate the area and notify the Emergency Coordinator, who must then use trained outside personnel for the response activities.

8. The facility Emergency Coordinators are responsible for complying with the mandated spill reporting and recording requirements, as outlined in Reporting Requirements, in Section III.

9. After the spill has been contained and collected, the area must be decontaminated. Follow the decontamination procedures.

Decontamination Procedures

1. Decontamination is typically performed using a water rinse, but other neutralizing solutions will be more appropriate for certain materials, as indicated in the Material Safety Data Sheets. The decontamination rinses must then either be processed in the evaporator or transferred in DOT-approved shipping containers to a permitted TSD Facility. The Emergency Coordinator will select the appropriate decontamination and rinsate residue disposal methods, after reviewing the Material Safety Data Sheets and consulting with appropriate regulatory authorities. When you are working with chemicals you must take care to not contaminate any areas outside your work area. This is for worker protection from contamination and will help prevent any chemical reactions with incompatible materials.

2. Any employee or equipment leaving a contaminated area must be decontaminated.

3. If your gloves or boots have become contaminated they must be decontaminated before removal. This means you must rinse them thoroughly in either the rinse tank or a special tray set up for this purpose. Gloves should then be washed with soap and water in the sink.

4. If your clothing or Tyvek suit has become wetted with chemicals you must remove it immediately and proceed to the shower. If you have been exposed to cyanide fumes or dust you must also immediately remove your clothing and shower.

Remove contaminated clothing cautiously, taking care not to make contact with the outside of the clothing. Place clothing or Tyvek suit in a drum for Class I disposal.

5. If you are wearing impermeable clothing it must be decontaminated before removal. Although the Tyvek suits are resistant to chemicals they shall be considered as permeable.

Leaking Container Procedures

1. These procedures described the authorized methods for responding to a leaking container of hazardous material and/or waste. Facility personnel are only to attempt leaking container response activities at the express direction of the Emergency Coordinator, to whom all spills and leaks must be immediately reported! As always in responding to a chemical emergency response personnel must consult the particular hazards of the material(s) in question, as described on the Material Safety Data Sheets. See *Reporting Requirements,* Section III for details on spill notification and record keeping requirements.

2. Stop whatever you are doing and determine which container is leaking. Approach the spill from upwind, check for ignition sources if flammable material is involved. *Check the spill area for any signs of chemical fumes before approaching.* ***If unusual fumes are detectable DO NOT ENTER****! Immediately notify the Emergency Coordinator.*

3. Determine what the material is that is leaking. Assume that it poses the worst possible health hazard to you and deal with it as such.

NOTE: Handle the materials as specified by the material safety data sheets. Employees may not attempt spill response activities unless all of the safety equipment indicated in the material safety data sheets is available functional and used.

4. DO NOT move the container (except to prevent or alleviate another problem more immediate) until after you have contained and controlled the leak and spill. Spill containment can often be accomplished by diking the spill area with chemical absorbent. Depending on the location and extent of the spill, additional efforts may have to be taken to prevent an unauthorized spill discharge, including temporarily covering the storm drains.

5. If necessary, lay the leaking container on its side with the leak or hole pointed up. This will slow or stop the leak.

6. To plug leaking containers, mix a handful of the Plug 'n' Dike material with water to form a clay-like ball about 2-3 times larger than the hole. Smooth the material down at the edges until the leaking stops. Check for leakage after a few minutes. If necessary, smooth again or add some more Plug 'n' Dike.

7. Take another bag of absorbent and pour it to form a dike for containing the spilled material.

8 Place the leaking containers(s) inside the recovery drum. If the leaking container is a 55-gallon drum, you can use the following procedure for placing it in a recovery drum:

a. Make sure you are wearing the necessary protective clothing, as specified in the Emergency Response Plan and Material Safety Data Sheets for the materials in question, including gloves, splash shield, chemically resistant suit, and appropriate respiratory protection, as specified in the MSDS.

b. Set the leaking drum upright with the hole top-most.

c. Take a 60" plastic bag and cover the drum. This will reduce the hazard of being splashed by the chemical.

d. Place the recovery drum, upside down, over the leaking drum.

e. Push against the inside of the recovery drum. Then push the drums over on their sides. The leaking drum will be inside the recovery drum. Note: A block of wood or a drum-handling bar can be used to trip the drums making it easier to perform the next step.

f. Immediately lift the recovery drum so that it is now right side up and the leaking drum is contained within it.

9. Use a dustpan or shovel to spread the absorbent. When all of the spilled material is absorbed, use the dustpan to scoop the absorbent up and put it in the recovery drum with the leaking container. In the event that the spill involves a flammable liquid or solid the use of metal dustpans must be avoided, in order to minimize fire and explosion hazard.

10. If necessary, the Emergency Coordinator will contact a professional chemical response contractor, as outlined in the Emergency Response Plan.

11. After the clean up is complete, the recovery drum can be sealed and stored. Report immediately to the Emergency Coordinator the details of what transpired. The Emergency Coordinator will direct the labeling of the recovery drum, as required by federal, state, and local regulations.

12. Finally, immediately after the area has been decontaminated, replace any emergency response equipment that was used, to help ensure its availability in the next emergency situation.

IX. IMMINENT FLOOD PROCEDURES

Note: These procedures are not specifically required, as the facility does not lie within the 100-year shallow flooding zone (i.e. zones designated as AO with an estimated flooding depth of 1 foot). However, J&B will still maintain these procedures as a reference and a precaution for any other unplanned event that may require dealing with flood or other unknown hazard.

1. Should an imminent flood warning has been given, all of the solder dross and hazardous waste solutions being stored at the facility will be loaded onto the facility waste hauling vehicles and immediately transported (using a Uniform Hazardous Waste Manifest) to another facility for storage or for processing. Assuming a typical solder dross inventory of 16 - 55 gallon drums, and no more than 4 - 55 gallon drums of silver photo solution, this will require two trucks.

2. On the way back from the other facility, one of the vehicles will stop off at one of a variety of local facilities to collect empty 55 gallon drums (DOT-approved, plastic, closed head) for the repackaging of the hazardous waste in treatment, if needed. This will require no more than 30 empty 55-gallon drums (depending on the on-site drum stock at the time of the flood). The estimated time to load the vehicles and complete the round trip to the other facility, and stop at another local facility on the way back for empty drums, is no more than two hours.

3. The precious metal containing hazardous wastes that are in the treatment process will then be manually transferred to labeled DOT-approved 55 gallon drums using a drum pump. No more than 1,525 gallons of solution should be in process at any one time between the strip tank, evaporator, concentrator, and precipitation tanks. The waste, if any, will be subjected to pH neutralization at this time. The transfer of these solutions and the pH neutralization operation are estimated to take two people approximately two hour. This waste containerization operation can be started before the waste hauling vehicles arrive back at the facility, as long as there appropriate containers on-site.

4. The hazardous wastes from the storage and treatment areas will then be loaded onto the three registered vehicles, which will be parked inside the facility for the duration of the storm. Since the height of the flatbeds are more than four feet above the ground this will effectively remove the hazardous wastes from the path of the flood waters which are not expected to exceed the one foot level. Assuming a maximum inventory of hazardous wastes, as listed above, this would give a total waste weight of about 30,000 pounds, which is within the capacity of the three registered waste hauling vehicles. The estimated truck loading time is one hour and will require two people.

5. The metal tanks at the facility (concentrator, strip tank, evaporator, and furnace) will not present a danger of waste run-off as the tank openings are all more than one foot off the ground. In addition, the weight of these units, and their manner of installation, are such as to prevent them from being washed away in a 100-year storm. In order to ensure that the plastic precipitation tanks are not washed away from the facility they will be stacked on top of the waste hauling vehicles, along with any used crucibles that are present.

6. The total estimated time required to complete this plan as described above is no more than five hours. This can be accomplished using the seven plant personnel without outside assistance, although a trained outside service may be used. The emergency coordinators are available during off hours to ensure that, in the event of any crises, someone is available to direct personnel or outside contractors (alternative support).

7. Should the Emergency Coordinators deem it to be necessary, the hazardous wastes that have been loaded onto the waste hauling vehicles will be transported out of the area to the 21st Century/EMI facility in Fernley, NV. While this should not be necessary in a 100-year flood situation due to the procedures described above, it is an option that is available for emergency use.

X. SHUTDOWN PROCEDURES

1. Electrical Shut off

Power outage-turn off power to the Furnaces, ovens, and mix tanks. Turn off all breakers in the panel boxes located across from the offices. Be certain that all equipment is off before turning the breakers back on.

The facility now has an emergency backup generator power supply that will automatically activate with any power interruption and continue to provide emergency lighting and ventilation to key areas of the facility.

2. Gas Main Shut-off

Using a large crescent wrench or pliers, turn gas valve 90° clockwise so that valve is perpendicular to the pipe. Gas mains are located outside in the front of the building. For expediency, the furnace line is equipped with a valve and can be isolated by itself.

3. Water Main Shut-off

Turn the handle until closed. The main water valve is located in the front of the building between the sidewalk and the street and is marked "water".

4. Welding Gas Shut-offs

Be sure to shutoff all welding gases at the tank(s) during an emergency. Turn valve on tank until it is all the way in the down in the closed position.

5. Other

Check to see that all containers of hazardous wastes are closed, and all chemicals are safely stored.

XI. CONFINED SPACE PROCEDURES

A confined space is an enclosed area where entry and exit are limited and there are physical hazards or there is an unfavorable natural ventilation, which could cause a build-up of a dangerous atmosphere. This usually includes tanks, vats, vessels, tunnels, sewers, etc..

As an employee at J & B you will not (and must not) work in this type of situation; however, if there were to be an accident in which hydrogen cyanide was being released faster that the

ventilation system in the process room was removing it, then the room could be considered a confined space!

If there is a generation of, or build up of cyanide gas in any room you must leave immediately! Do not re-enter the room! Only a few breaths of air contaminated with hydrogen cyanide can kill you. If you can do so without exposure to yourself, remove any injured persons from the room. Sound the alarm. Follow the evacuation and chemical release procedures.

If any confined space is to be entered, confined space entry procedures will be observed.

XII. EMERGENCY EQUIPMENT INSPECTION PROCEDURES

1. Fire Extinguishers

Fire extinguishers are certified and refilled by a licensed firm annually, and checked monthly during the monthly inspection. (See the attached Facility Map for the locations of these.)

2. Shower and Eyewash Stations

These stations are checked monthly for performance and cleanliness. The eyewash must be flushed during the inspection to remove any particulate matter.

3. Alarm Systems

Fire and Burglar systems are checked annually.

4. Spill Clean up and Safety Equipment (See Attachment 3)

Spill Clean-up equipment is replaced when used and the supply is checked monthly. An inventory will be taken monthly to insure the equipment is replaced when the inventory falls below the minimum quantities.

5. Propane Supply Tank & Emergency Backup Generator

The propane (LPG) tank valve supplying the backup electrical generator must be on at all times and should never be left turned off after any maintenance.

6. Repair And Replacement

All equipment is repaired or replaced when necessary. Repairs will only be made by qualified person. For example, if the alarms fail only a technician from the alarm company may make the repair.

XIII. AMENDMENTS TO EMERGENCY RESPONSE AND CONTINGENCY PLAN

This emergency plan shall be amended whenever:

1. Applicable regulations are revised.

2. The plan fails or does not perform adequately in an emergency.

3. The facility changes in a way that increases the potential for fires, explosions, or releases of hazardous materials and/or wastes, or changes the response necessary in an emergency situation.

4. The list of Emergency Coordinators changes.

5. The list of emergency equipment changes.

6. The facility changes in any other way to effect any of the information contained in this plan.

Ken Epsman is the person responsible for monitoring the need for amendments or changes to this plan, and for making sure that the required changes are completed. The facility operator/owner is responsible then for distributing the amended plan and for ensuring that a copy of this plan is maintained at the facility.

This plan has been reviewed and approved by Ken Epsman, owner/operator of J&B Enterprises.

ATTACHMENT 1

EMERGENCY CONTACT LIST

See the attached list for current information.

ATTACHMENT 2

REPORTING REQUIREMENTS FOR UNAUTHORIZED DISCHARGE

"RECORDABLE DISCHARGE LOG"

Storage Facility: J&B Enterprises, 1650 Russell Avenue, Santa Clara, CA 95054

Time/Date of Discharge Discovered: _____

_____

Amount and Type Material Discharged: _____

_____

Corrective Action Taken and/or Needed:

_____

_____

_____

_____

Cause of Discharge: _____

_____

_____

_____

Time/Date Corrected: _____

Method of Disposal: _____

_____

_____

_____

Other Comments: _____

_____

_____

_____

Agencies Contacted and Contact person, date, and time (briefly describe what was said):

_____

_____

_____

Responsible Officer Signature/Title: _____

ATTACHMENT 3

FACILITY EMERGENCY RESPONSE EQUIPMENT

The following equipment is kept at the facility for use in emergency situations:

A. Safety Equipment- located in the process room

Minimum Quantity	Description
1. 2 pair	PVC/Nitrile boots - provide the most chemical resistance for a range of chemicals, including nitric acid and cyanide.
2. 4 pair	Gloves - Butyl gloves in medium and heavy-duty thickness. Rated "rr" by American Conference of Governmental Industrial Hygienists (ACGIH) for cyanide. Also provide protection against inorganic acid and sodium hydroxide.
3. 2 sets	Plastic clothing - Poly-laminated Tyvek total body coveralls with closed sleeves and hoods. Has a 50 minute breakthrough time for 70% nitric acid, a >480 minute breakthrough time for 40% sodium hydroxide, and a <240 minute breakthrough time and a 0.001 $mg/m^2/sec$ permeation rate for 45% sodium cyanide.
4. 4 pair	Splash goggles - Chemical splash goggles with indirect venting, meeting ANSI Z87.1-1979 standards for eye protection.
5. 2 pair	Face shields - Designed for chemical splash protection.

B. Spill Response Equipment- located in the process room

Minimum Quantity	Description
1. 1	Recovery/repack drum - 85-gallon size.
2. 1	Open top drum - 17H - 55 gallon DOT approved.
3. 6	Absorbent - 50-pound bags of anhydrous clay or diatomaceous earth.
4. 1	Plug 'n Dike material
5. 1	10' x 10' plastic sheet
6. 1	50' garden hose (3/4") and nozzle for emergency wash.
7. 5	Heavy-duty trash can liners (60", 4 mil)
8. 1 ea.	Scoop, shovel and dust pan
9. 1	Large push broom
10. 1	pH paper

11. 1 Duct tape

All of the above listed equipment is inspected weekly and a record of the inspection is maintained. If the quantity of an item falls below the minimum amount, it will be restocked or reordered immediately.

C. Other Emergency Equipment

1. Fire extinguishers are ABC type and are located throughout the facility.
2. Fire and burglar alarms are monitored by an alarm company who will notify the authorities if the alarms go off. There are three pull alarms located in the facility (see Attachment 7, the Facility Map).
3. Smoke and heat detectors are located on the ceiling throughout the facility.
4. Emergency eyewash and shower located in the process room.
5. Telephones for summoning aid are located in the process room, and in the offices.
6. First-aid Kit including cyanide antidote is located in the supervisor's office.
7. Fire Hydrant is located in front of the building.

The location of the emergency response equipment has been noted in the Facility Map, Attachment 7.

ATTACHMENT 4

Employee Roster – Current list of employees at J&B Enterprises, as of November 2010

Ken Epsman	Owner/Operator
Jim Shehan	Sales & Marketing Manager
Javier Espinosa	Sales
Tom Stillson	Refining & Furnace Operations
Jim Hague	Plant Foreman/Hazardous Waste Operations
Barb Clark	Administrator/Documentation
Ed Goodbout	Truck Driver & Materials Handler
Paul Villegas	Strip Tank Operator

Consultant who can be contacted in an emergency if no J&B employees are available

John Schultz
California Environmental Management Service Co., Inc.
Consultant, Environmental, Health & Safety

Phone: 650.966.1526

ATTACHMENT 5

Emergency Release Follow-Up Notice
Reporting Form Instructions
(this form may be reproduced, as needed)

GENERAL INFORMATION:

Chapter 6.95 of Division 20 of the California Health and Safety Code requires that written emergency release follow-up notices prepared pursuant to 42 U.S. C. 11004, be submitted using this reporting form. Non-permitted released of reportable quantities of Extremely Hazardous Substances (listed in 40 CFR 355, appendix A) or of chemicals that require release reporting under Section 103(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [42 U.S.C. 9603(a)] must be reported on the form, as soon as practicable, but no later than 30 days, following a release. The written follow-up report is required in addition to the verbal notification.

BASIC INSTRUCTIONS:

- The form, when filled out, reports follow-up information required by 42 U.S.C. 11004. Ensure that all information requested by the form is provided as completely as possible.
- If the incident involves reportable released of more than one chemical, prepare one report form for each chemical released.
- Of the incident involves a series of separate releases of chemical(s) at different times, the releases should be reported on separate reporting forms.

SPECIFIC INSTRUCTIONS:

Block A: Enter the name of the business and the name and phone number of a contact person Who can provide detailed facility information concerning the release.

Block B: Enter the date of the incident and the time that verbal notification was made to OES. The OES control number is provided to the caller by OES at the time verbal notification is made. Enter this control number in the space provided.

Block C: Provide information pertaining to the location where the release occurred. Include the Street address, the city or community, the county and the zip code.

Block D: Provide information concerning the specific chemical that was released. Include the Chemical or trade name and the Chemical Abstract Service (CAS) number. Check all. Categories that apply. Provide best available information on quantity, time and duration of the release.

Block E: Indicate all actions taken to respond to and contain the release as specified in 42 U.S.C. 11004(c).

Block F: Check the categories that apply to the health effects that occurred or could result from the release. Provide an explanation or description of the effects in the space provided. Use Block H for additional comments/information if necessary to meet requirements specified in 42 U.S.C. 11004(c).

Block G: Include information on the type of medical attention required for exposure to the chemical released. Indicate when and how this information was made available to individuals exposed and to medical personnel, If appropriate for the incident, as specified in 42 U.S.C. 11004(c).

Block H: List any additional pertinent information.

Block I: Print or type the name of the facility representative submitting the report. Include the official signature and the date that the form was prepared.

MAIL THE COMPLETED REPORT TO:

Chemical Emergency Planning and Response Commission (CEPRC)
Attn: Section 304 Reports
Hazardous Materials Unit
P.O. Box 419047
Rancho Cordova, CA 95741-9047

Note: Authority cited: Sections 25503, 25503.1 and 25507.1, Health and Safety Code. Reference: Sections 25503(b)(4), 25503.1, 25507.1, 25518 and 25520, Health And Safety Code.

(Note! The following page is the Emergency Release Follow-Up Notice Reporting Form, which is to be used to create a summary description and to be mailed, via certified and registered mail, to the OES. You also need to attach a complete detailed report as described in this document under reporting requirements.)

J&B ENTERPRISES - EMERGENCY RESPONSE & CONTINGENCY PLANS

A Business Name _____ Facility Emergency Contact & Phone Number _____

B Incident Date _____ Time OES Notified _____ OES Control Number _____

C Incident Address Location _____ City/Community _____ County _____ Zip Code _____

D Chemical or Trade Name (Print) _____ CAS Number _____

Check if Chemical is Listed in 40 CFR 355, Appendix A ___

Check if Release Requires Notification Under 42 U.S.C. Section 9603(a) ___

Physical State Contained
Solid ___ Liquid ___ Gas ___

Physical State Released Quantity Released
Solid ___ Liquid ___ Gas ___

Environmental Contamination
Air ___ Water ___ Ground ___ Other ___

Time Release _____

Duration of Release
Days ___ Hours ___ Minute ___

E Actions Taken _____

F Known or Anticipated Health Effects (use the comments section for additional information)

Acute or Immediate (explain)_____
Chronic or Delayed (explain)_____
Not Known (explain)_____

G Advice Regarding Medical Attention Necessary for Exposed Individuals

_____

H Comments (Indicate Section (A-G) and Item with Comments or Additional Information)

_____

I Certification: I certify under penalty of law that I have personally examined and I am familiar with the information submitted and believe the submitted information is true, accurate, and complete.

Reporting Facility Representative (print or type)_____

Signature of Reporting Facility Representative _____ Date:_____

ATTACHMENT 6

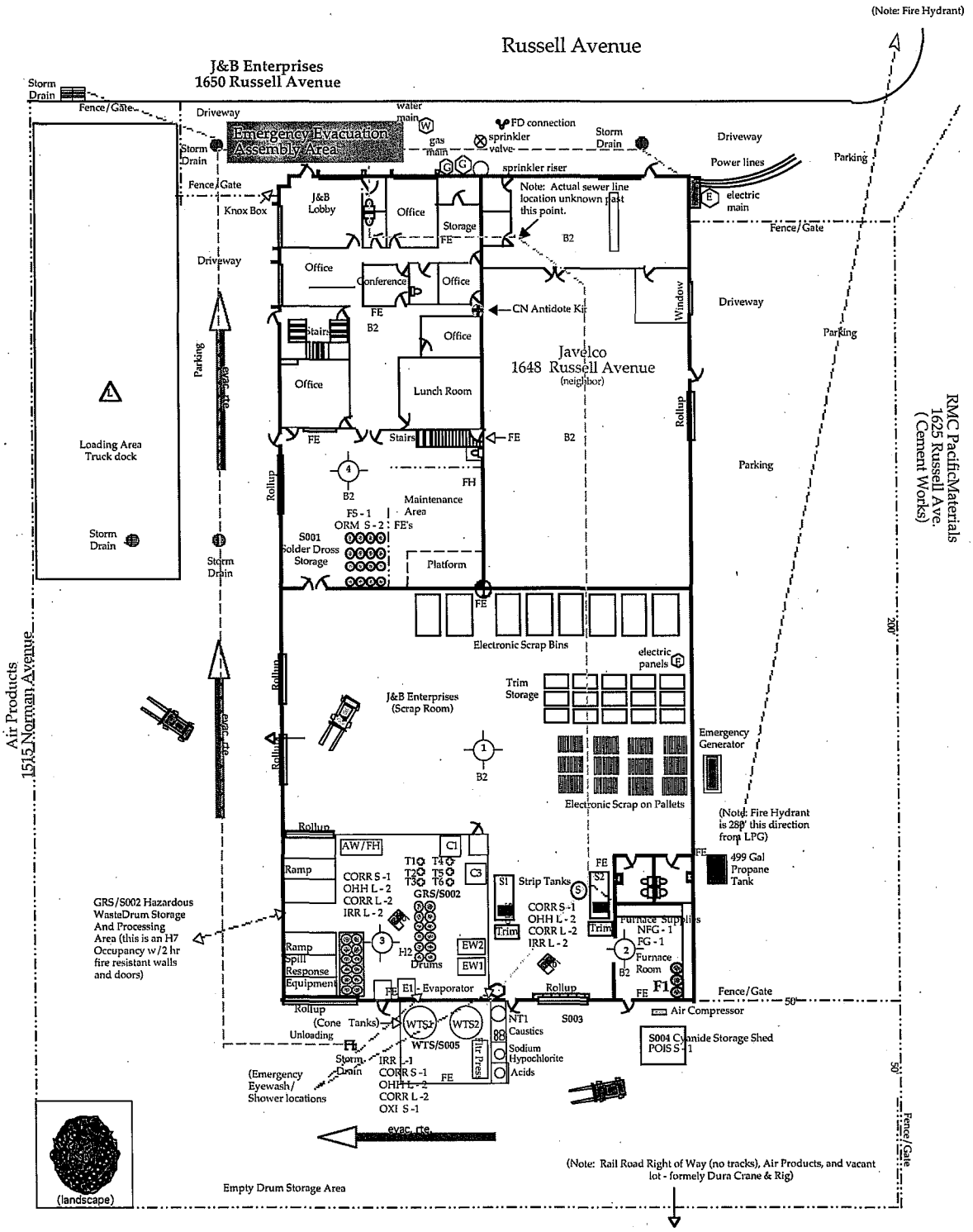
EMERGENCY EQUIPMENT INSPECTION FORMS

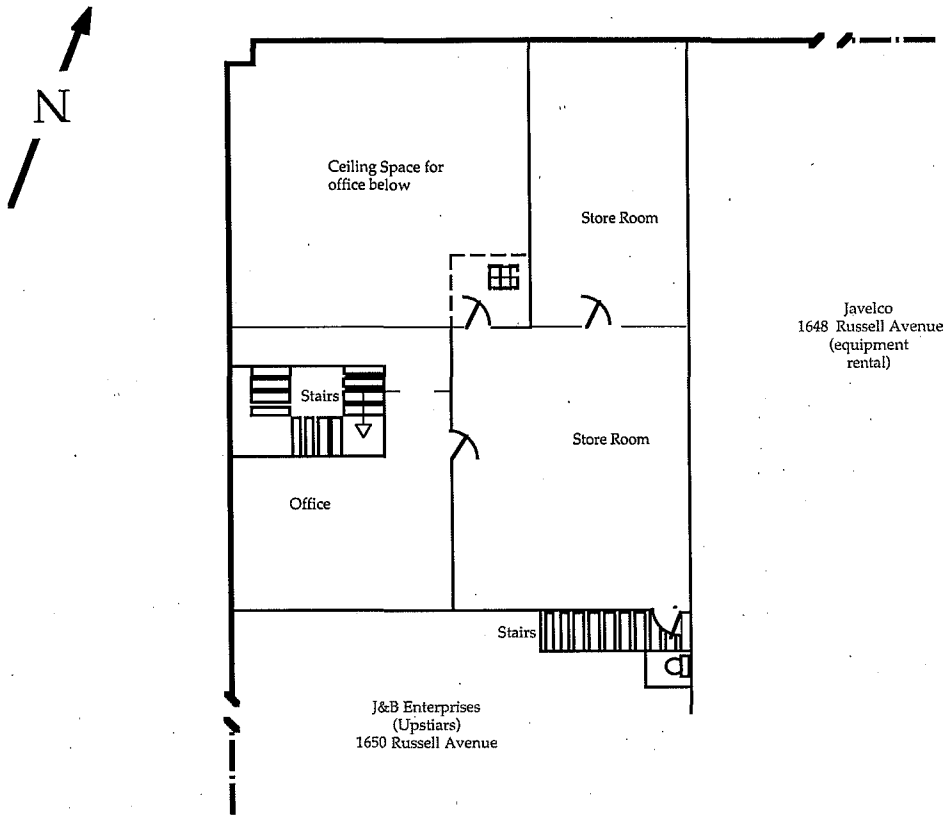
Please see the J&B Enterprises *"Facility Inspection Plan and Schedule"* Rev. November 2008, and the J&B Enterprises *"Facility Inspection Logs"* Rev. November 2008 for the complete facility inspection documents.

ATTACHMENT 7

FACILITY MAP

The Facility Map shows the layout of the facility, the process areas (Haz Mat use), fire extinguisher, fire sprinkler, gas, electric, and water shut-off, emergency power back up system locations. Also included are the emergency evacuation routes and the evacuation assembly area.


(Note: Fire Hydrant)
Russell Avenue
J&B Enterprises
1650 Russell Avenue
Storm Drain
Fence/Gate
Driveway
Emergency Evacuation Assembly Area
water main
FD connection
sprinkler valve
gas main
sprinkler riser
Storm Drain
Driveway
Power lines
Parking
Fence/Gate
Knox Box
J&B Lobby
Office
Storage
Note: Actual sewer line location unknown past this point.
electric main
Fence/Gate
Driveway
Office
Conference
Office
CN Antidote Kit
Window
Driveway
Parking
Stairs
Office
Office
Lunch Room
Javelco
1648 Russell Avenue
(neighbor)
Rollup
Parking
Loading Area
Truck dock
Storm Drain
Rollup
Maintenance Area
FS - 1
ORM S - 2
FE's
S001
Solder Dross Storage
Platform
Storm Drain
Parking
evac. rte.
RMC PacificMaterials
1625 Russell Ave.
(Cement Works)
200'
Air Products
1515 Norman Avenue
Electronic Scrap Bins
electric panels
Trim Storage
J&B Enterprises
(Scrap Room)
Emergency Generator
Electronic Scrap on Pallets
(Note: Fire Hydrant is 280' this direction from LPG)
499 Gal Propane Tank
Rollup
AW/FH
Ramp
CORR S - 1
OHH L - 2
CORR L - 2
IRR L - 2
GRS/S002
Strip Tanks
Furnace Supplies
NFG - 1
FG - 1
Furnace Room
GRS/S002 Hazardous WasteDrum Storage And Processing Area (this is an H7 Occupancy w/2 hr fire resistant walls and doors)
Ramp
Spill Response Equipment
Drums
EW2
EW1
E1 - Evaporator
Rollup
Fence/Gate
50'
Air Compressor
Rollup
(Cone Tanks)
Unloading
WTS1
WTS2
WTS/S005
NT1
Caustics
Sodium Hypochlorite
Acids
S003
S004 Cyanide Storage Shed
POIS S - 1
Storm Drain
(Emergency Eyewash/ Shower locations)
IRR L - 1
CORR S - 1
OHH L - 2
CORR L - 2
OXI S - 1
evac. rte.
(landscape)
Empty Drum Storage Area
(Note: Rail Road Right of Way (no tracks), Air Products, and vacant lot - formely Dura Crane & Rig)
Fence/Gate
50'
N
California Environmental Management Service Co., Inc.
Nov. 5, 2008
(1 of 2 pgs)
J & B Enterprises - Facility Map
1650 Russell Ave., Santa Clara, CA
Scale
1" = 30'



California Environmental Management Service Co., Inc.	Nov 2008 (2 of 2 pgs)
J & B Enterprises - Second Floor Office	

Scale
approx. 1" = 20'

Note: This is a detail of second floor- NW corner of building only

Key:
FE = Fire Extinguisher
FH = Fire Hose

EMERGENCY CONTACT LIST

(Revise when changed - insert page 22 of OP copy of ERP)

IN THE EVENT OF AN EMERGENCY, PLEASE CONTACT THE FOLLOWING:

PRIMARY EMERGENCY COORDINATOR:

Jim Shehan
2215 Willester Ave.
San Jose, CA 95123

Work Phone: (408) 988-7900
Cellular Phone (408) 234-5480

ALTERNATE EMERGENCY COORDINATOR:

Tom Stillson
1756 Oswald Pl.
Santa Clara, CA 95051

Work Phone: (408) 988-7900
Home Phone: (408) 244-2016

ALTERNATE EMERGENCY COORDINATOR:

Jim Hague
9364 Rodeo Dr.
Gilroy, CA

Home Phone: (408) 847-7516
Cell Phone (408) 781-0901

ALTERNATE EMERGENCY COORDINATOR:

Ken Epsman
19141 Panorama Dr.
Saratoga, CA 95070

Work Phone: (408) 988-7900
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IN THE EVENT OF A FIRE OR MEDICAL EMERGENCY CALL: 911
THEN GIVE THE FOLLOWING INFORMATION:

"This is (give your name) at J&B Enterprises located at 1650 Russell Ave. in Santa Clara. The nearest cross street is Thomas Rd. We have an emergency (specify type of emergency)-please send help. Someone will be waiting in front of the building to direct you when you arrive (send someone to do so). Our phone number is 988-7900.

FOR ALL OTHER EMERGENCIES (CHEMICAL, ELECTRICAL, OR OTHER), CONTACT ONE OF THE EMERGENCY COORDINATORS FIRST AND GET DIRECTIONS FROM THEM.

Revised 5/21/2009

STANDARDIZED PERMIT APPLICATION

SECTION IX - CLOSURE PLAN AND CLOSURE COST ESTMATE

For

J&B ENTERPRISES
CAD 982052797

July 2011

SECTION IX

CLOSURE PLAN

SECTION IX - CLOSURE PLAN/CLOSURE COST ESTMATE

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ATTACHMENT

"2011 Annual Financial Assurance Mechanism & Closure Cost Update" for J&B Enterprises, dated March 21, 2011

A. FACILITY CLOSURE

This Closure Plan is designed so that in the event of full or partial closure, there will be minimal efforts required to shut down and maintain the facility. This will be accomplished by removing all hazardous wastes and waste residues, and by decontaminating and/or removing all hazardous waste treatment equipment and storage structures. The nature of the operations of J&B Enterprises, when combined with the activities outlined in this Closure Plan, are such that the potential for post-closure escape of hazardous wastes (or residues or constituents thereof) is entirely eliminated or controlled and minimized.

Closure Performance Standard[1]
The facility will perform sampling and analysis to show that closure performance standards have been met. The results of the analysis will be at or below the following levels for the unit to be considered "clean" closed:

- Non-Detect – A Non-Detect is the detection limit for the specific analytical method. This would be applied to structures, equipment, and buildings but can also be used for soils and groundwater. This data will be compared to the hazardous waste criteria and appropriate environmental screening levels (ESL's).

- Background – A background level will apply to soil samples; however, background samples may be used for structures if samples of the original construction materials are available, such as those found outside of the hazardous waste treatment and storage areas. Background levels are applicable for determination by inorganic hazardous waste constituents such as metals. Background levels are the level of inorganic constituent that may exist in natural soil without any outside influence. In certain instances, background levels may also exist for organic constituents but will be discussed with the Agency overseeing the closure on a case-by-case basis.

- Hazardous Waste Criteria - If closure performance standards based on non-detect and background levels cannot be met, the facility may submit a health risk assessment that will provide levels that does not pose a substantial present or potential threat to human health and the environment. In this case, the hazardous waste criteria of the hazardous waste regulations will be reviewed and the data compared.

1. Closure Described

Partial Closure
Since J&B Enterprises handles several different types of metal bearing hazardous waste and non-hazardous scrap products, stoppage of the precious metals bearing hazardous waste recycling activities could be performed with a continuation of the hazardous waste hauling, repackaging, and transfer station operations. Or, in the event that a process is discontinued, or a piece of equipment be removed, a closure will ensue. This decision will be based on financial considerations, future changes in facility permitting or operating status, and the interests and needs of the owner/operator.

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[1] *(Note: This document is the existing, approved closure plan. It has been updated here to more closely conform to the "Standardized Permit Application Guidelines" and new section and changes are italicized for ease of comparison.)*

Full Closure

Where the decision is made to shut down the facility and perform full closure, the only remaining hazardous waste activities would involve inventory reduction and decontamination and/or removal of equipment, tanks, and structures. Inventory reduction will be performed via the on-site processing of gold containing wastes and by-products, and the transportation of all other hazardous wastes to a permitted off-site facility. Some of the decontamination rinse waters will also be processed on-site, as described below, in order to recover any trace gold present and to perform waste reduction. In the event of full closure, steps will be taken as described below.

Procedures

a. The facility operator will notify the DTSC at least 180 days ahead of the intended hazardous waste facility closure date, or as soon as possible.

b. Customers will be notified that scrap and hazardous wastes will no longer be accepted or processed on-site as of a specified date, at least 90 days before the intended closure date reported to the DTSC, as outlined in item a. above.

c. No further material(s) will be accepted for reclamation/treatment as of the date outlined in item b. above. All remaining materials and wastes will be processed on-site, or transported to an off-site permitted TSDF for reclamation or disposal as appropriate, as described below.

d. The decontamination and subsequent removal by sale or disposal of all treatment equipment and structures will commence. Most of the solutions used for equipment decontamination will be processed on-site in order to reclaim the precious metals present, as described below.

e. J&B Enterprises will be shut down in whole or in part as the result of an emergency situation, court order, or because of planned closure.

2. Extent of the Facility Open During Life of Facility

Should the facility be completely closed, or the partial closure of any part of the hazardous waste operations discontinued, no further treatment of hazardous wastes would continue except as part of the facility closure operations described below. Depending on the situation, the solder dross transportation and repackaging operation could continue indefinitely, as well as other hazardous waste transportation and transfer station operations, and other metals reclamation activities that do not involve hazardous wastes.

3. Maintenance

To minimize, or eliminate maintenance needs in the event of closure, all hazardous wastes (and residues and constituents thereof) will be removed, and the equipment and structures will be decontaminated and possibly removed. Security measures will be taken to keep out intruders including locking and alarming of the facility.

4. Control of Residues

To prevent escape of hazardous materials to the atmosphere and the ground and surface waters after closure, and to protect the public and the environment from harm, the following actions will be taken.

a. All of the hazardous wastes at J&B Enterprises after the cut-off date will either be processed on-site using the existing equipment, or transferred to another permitted facility for precious or scrap metal reclamation, as described below. The waste processing equipment will then be decontaminated and removed as needed from the site, with the decontamination solutions being processed on-site to recover trace gold, or transported off-site to a permitted facility for gold reclamation, as described below. However, some of the waste treatment and storage equipment and structures will be removed from the site as hazardous waste, as described below.

b. Hazardous waste constituents: There will be no danger of hazardous waste constituents getting into the ground, surface waters or atmosphere after closure, as they will have already been removed from the facility, as verified via sampling described below.

c. Leachate: Not applicable as all hazardous waste processing and storage occurs in above ground-covered areas with secondary containment. All handling of hazardous wastes with free liquids occurs in secondarily contained areas. The hazardous waste storage and processing areas will be completely decontaminated during the facility closure operations so that there is no possibility of generating contaminated leachate.

d. Contaminated rainfall is not a problem for the same reasons as identified above.

e. Waste decomposition products will not be a concern as all of the hazardous wastes (and residues/constituents thereof) will be removed during the facility closure operations, as described below.

5. Closure Schedule

Anticipated Facility Closure Schedule: The schedule below will be followed as closely as possible regarding closure of the facility. The following are targets to be completed by date, and not actual goals. Any partial closure of one or more of the components will be addressed in supplemental closure procedures to be developed as needed.

Day +180	Notify DTSC of intended Closure period to begin in 180 days and to end within 330 days.
Day +90	Notify clients that the on-site reclamation of hazardous waste and non-hazardous scrap metal will stop in 90 days (this notification may be made earlier).
Day 0	Official Closure start date. Hazardous waste acceptance cut-off date, and start of closure period. (If this is not a full facility closure, some hazardous waste transfer station operations may continue at this point. These will be identified at the time of closure.)

Day 30	Complete the processing of all precious metals containing hazardous waste and scrap metal in the treatment and storage areas, and containerization all of the waste residues and by-products.
Day 37	Complete the transportation of all solid hazardous waste, and any precious metals containing liquid hazardous waste not processed on-site, to a permitted off- site facility.
Day 40	Complete the decontamination of the strip tanks and transfer the solutions to one or more of the waste processing tanks for metals recovery. Collect decontamination verification samples from the strip tanks.
Day 45	Complete the decontamination of all concentrator tanks and transfer the wash solutions to the wastewater treatment system or evaporator for further processing and disposal. Collect decontamination verification samples.
Day 50	Remove the gold precipitation and electrowinning tanks, and the miscellaneous facility waste handling equipment (pumps, filters, pH probes, etc.) and transfer them to a roll-off hazardous waste dumpster pending transportation off-site for reclamation, or treatment and disposal.
Day 55	Complete the decontamination of S004, the outside hazardous waste storage building. Collect decontamination verification samples. Alternatively, transport off-site as hazardous waste to a permitted facility.
Day 60	Receipt of the initial lab reports for the decontamination verification samples for strip tanks.
Day 60	Remove the ventilation ductwork and transfer it to a roll-off hazardous waste dumpster pending transportation off-site for reclamation, treatment, or disposal.
Day 70	Receipt of the initial lab reports for the decontamination verification samples for concentrators.
Day 70	Complete the decontamination of the furnace and evaporator tanks, and collect the decontamination verification samples.
Day 95	Receipt of the initial lab report for the decontamination verification samples for furnace and evaporator tank.
Day 110	Complete the removal of any remaining hazardous wastes, or residues or byproducts thereof. Complete the removal of all treatment and storage equipment, by resale or by transportation as hazardous waste to an off-site permitted facility as appropriate, except for the wastewater treatment system as noted below.

Day 115	Complete the inspection and cleaning of the facility containment floors (S001, S002, S003, S004, and S005) and the surrounding areas and decontaminate if necessary, and perform floor chip and/or wipe sampling and subsurface soil sampling.
Day 120	Complete the decontamination of the evaporator and the waste water treatment system, the secondary containment, and both treat and dispose via permitted sewering, or containerize the wash waters, solutions, and sludge's for transportation to an off-site permitted facility for disposal. Collect the decontamination verification samples inside tanks, containers, and secondary containment. Collect floor and soil samples for verification of decontamination. Remove the ventilation ductwork for the evaporator and transfer it to a roll-off hazardous waste dumpster pending transportation off-site for reclamation, treatment, or disposal.
Day 142	Receive initial lab report regarding subsurface soil and floor chip or wipe samples.
Day 145	Receipt of the initial lab reports for the decontamination verification samples collected from the evaporator, waste water treatment system, and gold processing areas (S001, S002, S003, S004, and S005).
Day 180	Submit the final closure report with certification by the owner/operator and an independent registered engineer. Alternatively, submit a supplemental remedial action plan if significant contamination is discovered.

B. MAXIMUM INVENTORY ESTIMATES

1. Estimate maximum inventory of wastes in storage or treatment:

a. Storage
S001 - 10 Tons Maximum Solder Dross (26 - 55 Gallon Drums)
S002 - 5500 Gallons in Storage Area
S004 - 495 Gallons Maximum Precious Metal Containing Waste in Storage Area
S005 - 2000 Pounds of Filter Cake

b. Treatment
S002 - 3950 Gallons Maximum of Solutions in the Gold Recovery Systems
S002 - 195 Gallons Maximum of Solutions in the Alternative Waste Treatment System
S003 - 230 Gallons Maximum in Resin Regeneration System
S005 - 2725 Gallons Maximum in Wastewater Treatment System

c. Other – None

Total Estimated Maximum Waste Inventory On Hand

S001 - Solder Dross (26 - 55 Gal Drums)	10 Tons
S004 - Precious Metal Containing "Wastes"	9945 Gals
S002 - Filter Cake	1.0 Tons
Evaporator Solids	1.0 Tons
Waste Water Solutions	2955 Gallons

2. Estimate waste generation from closure activities: These waste generation estimates are based upon Closure Scenario B, the DTSC directed Closure process.

a. Decontamination of Facility

Loading/Unloading Tray (75 Sq. Ft. X 0.025 Gals Bleach/Sq Ft) 2 (4 Gals Bleach) 8 Gals Rinse water	4 Gals Bleach Solution
Gold Recovery and Alternative Waste Treatment Room (S002) (2000 Sq. Ft. X 0.025 Gals Bleach/Sq Ft) 2 (50 Gals Bleach)	50 Gals Bleach Solution 100 Gals Rinse water
Wastewater Treatment System Area (S005) (420 Sq. Ft. X 0.025 Gals Bleach/Sq Ft) 2 (10.5 Gals Bleach)	10.5 Gals Bleach Solution 21 Gals Rinse water
Resin Regeneration System Area (S003) (35 Sq. Ft. X 0.025 Gals Bleach/Sq Ft) 2 (1 Gals Bleach) 2 Gals Rinse water	1 Gal Bleach Solution
Strip Area (560 Sq. Ft. X 0.025 Gals Bleach/Sq Ft) 2 (14 Gals Bleach)	14 Gals Bleach Solution 28 Gals Rinse water
Furnace Room 3 (75 Sq. Ft. X 0.025 Gals Water/Sq Ft)	5.5 Gals Rinse water

Exterior Storage Shed (S004) (60 Sq. Ft. X 0.025 Gals Bleach/Sq Ft) 2 (1.5 Gals Bleach)	1.5 Gals Bleach Solution Est. 3 Gals Rinse water Est.
Solder Dross Storage Area (S001) 3 (400 Sq. Ft. X 0.025 Gals Water/Sq Ft)	30 Gals Rinse water
TOTAL	**81 Gals Bleach Solution** **198 Gals Rinse water**

B. Solid Waste For Disposal (All Weights Are Estimated)

Empty Containers	1000 Lbs
Strip Tanks #1 & 2	3000 Lbs
Concentrator Tanks (C-1 And C-2)	1600 Lbs
Concentrator Tank (C-3)	1200 Lbs
Precipitation Tanks (T1 Through T6)	120 Lbs
Precipitation Containers	60 Lbs
Electrowinning Tanks (EW-1 Through EW-3)	600 Lbs
Wastewater Treatment System Tanks (WTS-1 & WTS-2)	500 Lbs
Evaporator Tank (E-1)	2000 Lbs
Furnace (F-1)	950 Lbs
S004	2000 Lbs
Misc. Equipment (Piping, Pumps, Hoses, Etc.)	1300 Lbs
Decontamination of Equipment	200 Lbs

Total Estimated Decontamination Wastes

Mixed Decontamination Solutions	279 Gals
Solid Waste	14,545 Lbs

GRAND TOTAL ESTIMATED INVENTORY & DECONTAMINATION WASTES

Precious Metal Containing "Wastes"	9945 Gals
Wastewater Solutions	2955 Gals
Solder Dross (26 - 55 Gal Drums)	10 Tons
Filter Cake	1 Tons
Evaporator Solids	1 Tons
Solid Waste	7.3 Tons
Mixed Decontamination Solution	279 Gals

C. WASTE REMOVAL/TREATMENT

As previously described in Section A above, all hazardous waste in the facility at the time of closure will be processed in the gold reclamation and waste water treatment systems, except that the solder dross, filters, photo solutions, and other repackagable/transferable items will be transported to another permitted off-site recycling facility for reclamation.

Some of the facility decontamination "wastes" will also be processed on-site to recover trace gold content. Most of the remaining decontamination solutions will be treated on-site in the wastewater treatment system. The solid filter cake residue will be transported off-site to a permitted TSD Facility, along the final decontamination rinses, as needed. See Section D below for additional details on waste treatment and removal.

D. DECONTAMINATION PROCEDURES AND SAMPLING FOR STRUCTURES, EQUIPMENT, AND BUILDING

1. Equipment and Structures Subject to Closure

List of facility equipment requiring decontamination: The items listed below are either clearly identified on the plot plan, or described below.

a. Tanks (All tanks to be disposed of as hazardous waste under scenario B, DTSC directed closure.)

- Strip Tanks (S-1 through S-2)
- Concentrators (C-1, C-2[2], C-3)
- Precipitation tanks and conical precipitation tanks (T-1 through T-6) - Disposed of as solid hazardous waste.
- Electrowinning tanks (EW-1, EW-2, EW-3[3]) - Disposed of as solid hazardous waste.
- Evaporator (E-1)
- Furnace (F-1)
- Wastewater Treatment System Tanks (WTS-1 and WTS-2)

b. Containers
- Filter Press
- Ion Exchange Columns
- All other hazardous waste containers - To be disposed of as solid hazardous waste.
- Empty Drums, Buckets, IBC and other containers (e.g. Pyrex, bottles, etc.)

The bulk of the hazardous waste containers will be reused to transport treatment residuals and solid hazardous wastes to another permitted facility for reclamation. We estimate the following containers types and numbers will remain on-site and will be transported off-site for disposal as hazardous waste:

- Metal drums, removable heads - 15, 30, and 55 gallons - 10 total
- Polypropylene drum - 15, 30, and 55 gallons - 10 total

[2] (Note: C-2 has not been installed, this is a placeholder tank.)

[3] (Note: EW-3 has not been installed, this is a placeholder tank.)

c. Secondary Containment Systems

- S001 - Decontaminated
- S002 - Decontaminated
- S003 - Decontaminated
- S004 - Decontaminated
- S005 - Decontaminated

d. Floors

- S001- Solder Dross Storage Area - Decontaminated
- S002 - Gold Recovery Room - Decontaminated
- S003 - Resin Regeneration Area - Decontaminated
- S005 - Wastewater Treatment System Area Decontaminated
- F-1 - Furnace Room - Decontaminated
- S-1, S-2 - Strip Area - Decontaminated

e. Pipes, Pumps, Valves, and Hoses

- Portable pumps and hoses - To be disposed of as solid hazardous waste.

f. Loading and Unloading Tray- Decontaminated

g. Miscellaneous Equipment

- Filters, ventilation piping, pumps, hoses, gloves - To be disposed of as solid hazardous waste.

h. Other

- None identified.

2. Decontamination Procedures and Hazardous Waste Disposal

The facility equipment and structures will be decontaminated as described below. Facility personnel using all safety and personal protective equipment required for normal operation of the gold recovery process will perform all decontamination activities. Alternatively, certified outside personnel will be used to complete these closure activities if necessary.

(1) Scenario A - Closure to be performed at direction of J&B Enterprises

Scenario A is a self-directed closure that will be completed by J&B Enterprises and their consultant(s) or contractor(s). This scenario proposes a normal and routine closure, either partial or full.

a. All of the gold-containing scrap and hazardous waste at the facility at the time of closure will be processed through the existing gold reclamation and waste water treatment systems or transported off-site to a permitted facility for reclamation, or sold as appropriate and legal. In addition, all solid hazardous waste (primarily solder dross and some evaporator sludge's and demolition debris such as old tanks, containers, and ancillary equipment) will be

containerized and transported to another permitted facility for reclamation or for disposal as hazardous wastes.

b. Any of the hazardous waste containers that were not used to transport the solder dross or other materials off-site, will be placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal. As an exception to these procedures, several containers will be retained on-site for the packaging and transportation of the by-product from the gold recovery system. These containers will be decontaminated prior to use.

c. The double-walled metal strip tanks will be decontaminated by rinsing each of them with approximately 85 gallons of bleach solution (sodium hypochlorite 5-10%), followed by triple rinsing with 85 gallons of city water each time to ensure complete decontamination. The secondary tank will be similarly washed, as access permits. The bleach and rinse water solutions will be combined and transferred to the concentrator tank for gold reclamation. The exterior of the strip tank will then be cleaned by power washing, with the resultant wash solution transferred to the concentrator tank for gold reclamation.

d. In order to verify the complete decontamination of each of the strip tanks, at least two wipe or one rinse sample will be collected from the inside surfaces of each tank and sent to a DTSC certified hazardous waste testing lab. Lab parameters will include: Cyanide, copper, nickel, silver, and lead. Should lab analysis indicate that the strip tanks are not contaminated, they will be resold and removed from the facility. However, should lab results indicate that either of the strip tanks are still contaminated, the tanks(s) will be decontaminated again as described above and subjected to repeat testing until complete decontamination can be demonstrated, or alternatively the tank(s) will be removed from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

e. The metal concentrator tanks (C-1 through C-3) will be decontaminated by rinsing each of them with approximately 20 - 30 gallons of bleach solution (sodium hypochlorite 5-10%) followed by triple rinsing with 20 - 30 gallons of city water each time to ensure complete decontamination. The bleach and rinse water solutions will be combined and transferred to the evaporator and/or wastewater treatment system for processing. The exterior of the concentrator tanks will be decontaminated by power washing, with the wash water also being transferred to the evaporator tank or the waste water treatment system.

f. In order to verify the complete decontamination of the concentrator tanks, at least two wipe samples or one rinse sample will be collected from the inside surfaces of each of the tanks and sent to a DTSC certified hazardous waste testing lab. Lab parameters will include cyanide, copper, nickel, silver, and lead. Should lab analysis indicate that the concentrator tanks are not contaminated, they will be resold and removed from the facility. However, should lab results indicate that either of the concentrator tanks are still contaminated, the tank(s)will be decontaminated again as described above and subjected to repeat testing until complete decontamination can be demonstrated. Alternatively, one or more of the concentrator tanks will be removed from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

g. The plastic tanks that are used in the gold precipitation process (T-1 through T-6, and EW-1 through EW-3 will be crushed or cut up and placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

h. The miscellaneous facility waste handling equipment (filters, pumps, hosing, and probes etc.) will be crushed as necessary, and placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

i. Next, the outside hazardous waste storage area S004 will be decontaminated by power washing, with the wash water also being transferred to the evaporator and/or wastewater treatment system for processing.

j. In order to verify the complete decontamination of S004; at least one wipe sample will be collected for each 250 square feet of surface area, from the inside surfaces, and sent to a DTSC certified hazardous waste testing lab. This means that at least two wipe samples will be collected from S004. Lab parameters will include cyanide, copper, nickel, zinc, lead, and silver. Should lab analysis indicate the storage structure is not contaminated, it will be sold to another user or scrap metal dealer, and transported off-site.

However, should lab analysis indicate that the storage structure is still contaminated; it will be decontaminated again as described above and subjected to repeat testing until complete decontamination can be demonstrated. Alternatively, the shed will be removed from the site as hazardous waste to a permitted facility for treatment, recycling, or disposal.

k. Next, most of the ventilation ductwork will be removed and placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal. This item may be performed at an earlier point in time, as long as all of the processing operations in the affected tank have already been completed.

l. The facility furnace (F-1) should not be contaminated due to the nature of the hazardous waste reclamation operations conducted therein. However, in order to verify the complete decontamination of the furnace, a wipe sample will be collected from the unit, and sent to an ELAP certified hazardous waste testing lab. Analytical parameters will include cyanide and metals. Should lab results indicate the furnace is not contaminated, it will be resold and removed from the facility.

However, should lab results indicate that the furnace is contaminated, it will be decontaminated either by power washing or by rinsing with a bleach solution (5-10% sodium hypochlorite) followed by triple rinsing with city water to ensure complete decontamination, and then subjected to repeat testing until complete decontamination can be demonstrated. Alternatively, the furnace will be removed from the site as hazardous waste to a permitted facility for treatment, recycling, or disposal. Any decontamination rinses would be

transferred to the waste water treatment system for additional processing or shipped off-site as hazardous waste and no decontamination or sampling will be conducted.

m. The metal evaporator tank (E-1) will be decontaminated by rinsing with approximately 20 gallons of bleach solution (sodium hypochlorite 5-10%), followed by triple rinsing with 20 gallons of city water each time to ensure complete decontamination. The bleach and rinse water solutions will be combined and transferred to the wastewater treatment system for additional processing. The exterior of the evaporator tank will then be decontaminated by power washing, with the decontamination solutions also being transferred to the wastewater treatment system. Alternatively, it may be shipped off-site as hazardous waste and no decontamination or sampling will be conducted.

n. In order to verify the complete decontamination of the evaporator tank, at least two wipe samples will be collected from the inside surfaces of the tank and sent to a DTSC certified hazardous waste testing lab. Lab parameters will include cyanide, copper, nickel, zinc, lead, and silver. Should lab analysis indicate that the evaporator is not contaminated, it will be resold and removed from the facility.

However, should lab results indicate that the evaporator is still contaminated, it will be decontaminated again as described above and subjected to repeat testing until complete decontamination can be demonstrated, or alternatively it will be removed from the site as hazardous waste to a permitted facility for treatment, recycling, or disposal. Alternatively, it may be shipped off-site as hazardous waste and no decontamination or sampling will be conducted.

o. The floors in all hazardous waste storage and processing areas would then be decontaminated by power washing, with the decontamination residues being transferred to the wastewater treatment system for processing. In those areas in which cyanide-containing materials were handled, decontamination will include washing with a chlorine bleach solution, followed by rinsing with city water, and all decontamination residues being transferred to the wastewater treatment system for processing.

p. In order to verify the complete decontamination of the floors, either chip or wipe samples[4] will be collected from the concrete floor in the Solder Dross Storage Area (S001), Gold Recovery Room (S002), Resin Regeneration Area (S003), Wastewater Treatment System Area (S005), the Furnace Room, and the Strip Area and sent to a DTSC certified hazardous waste testing lab to ensure absence of contamination.

One chip or wipe sample will be collected for each 250 square feet of floor surface in each of these areas. This means that a minimum of 2 chip or wipe samples will be collected from the Solder Dross Storage Area, 8 chip or wipe samples from the Gold Recovery Room, 1 chip or wipe sample from the Resin Regeneration Area, 2 chip or wipe samples from the Wastewater

[4] Where floors are of a non-porous construction, such as steel or epoxy sealed concrete in good condition, a wipe sample will be collected. Where the floor may be a porous or non-sealed construction, such as bare concrete, where contaminants could be absorbed, a chip sample will be collected, if that is determined to be the best and appropriate means to assess the concrete.

Treatment System Area, 1 chip or wipe sample from the Furnace Room, and 2 chip or wipe samples from the Strip Area.

Lab parameters for all of the chip or wipe samples collected from the facility will include cyanide, copper, nickel, zinc, lead, and silver; except that the cyanide analysis will be omitted from the chip or wipe samples collected in the Solder Dross Storage and Resin Regeneration Areas (S003) since no Cyanide-containing materials or wastes have been stored or treated there.

Should the lab analyses indicate that the concrete floor in any of these areas is contaminated; it will be cleaned either by sandblasting or pressure washing, scrubbing with a chlorine bleach solution and rinsing with water, or other appropriate and effective method, and then re-sampled and tested. In the event that the concrete in any of these areas remains contaminated it may be removed, containerized, and transported as hazardous waste to a permitted off-site facility for disposal or recycling, or sealed with an appropriate sealant if the contamination is minor. Any decontamination solutions would be combined and transferred to the wastewater treatment system for additional processing or shipped off-site as hazardous waste.

q. The resin in the Ion Exchange Columns will be removed and containerized for disposal as hazardous waste or re-sold for reuse for the same purpose. The Waste Water Treatment and Resin Regeneration Systems (i.e. the empty columns) will be decontaminated by rinsing with approximately 20 - 40 gallons of bleach solution (sodium hypochlorite 5-10%), followed by triple rinsing with 20 - 40 gallons of city water each time to ensure complete decontamination. The exterior of the tanks and columns will then be decontaminated by power washing. The tanks, columns, filter press, ancillary pumps and equipment may be cleaned and resold for reuse for the same purpose. All sales will be documented.

r. In order to verify the complete decontamination of the tanks, at least two wipe samples will be collected from the inside surfaces of each of the tanks and sent to a DTSC certified hazardous waste testing lab. Lab parameters will include cyanide, copper, nickel, zinc, lead, and silver. Should lab analysis indicate that the evaporator is not contaminated, it will be resold and removed from the facility.

However, should lab results indicate that the any of the tanks are still contaminated, they may be decontaminated again as described above and subjected to repeat testing until complete decontamination can be demonstrated, or alternatively be removed from the site as hazardous waste to a permitted facility for treatment, recycling, or disposal.

s. Any personal protective equipment (PPE), or other miscellaneous items that are used in any of the above described decontamination operations will be containerized and transported off-site as hazardous waste to a permitted facility if it becomes contaminated. The amount of this waste is estimated at less than 200 pounds. All other solid hazardous wastes will be transported from the site to a permitted facility for recycling, or treatment and disposal.

t. The final decontamination rinses produced in step 'q' will consist of an aqueous solution (i.e. soap and water, water, or bleach water) with trace levels of bleach and heavy metals. A sample of the rinse solution will be collected, and sent to a DTSC certified hazardous waste testing lab for waste evaluation purposes. Lab parameters will include cyanide, copper, nickel, zinc, lead, and silver. Should lab analysis indicate that the rinse waters are not hazardous waste, they will be disposed of to the sewer after receiving authorization from the local publicly owned treatment works (POTW).

Alternatively, should lab analysis indicate that the waste has contaminants at levels higher than the allowable regulatory threshold; the decontamination residue(s) will be transported off-site as hazardous waste to a permitted facility for metals reclamation, or treatment and disposal.

u. Subsurface soil samples will be collected from beneath the Solder Dross Storage Area (S001), the Gold Recovery Room (S002), the Furnace Room, the Resin Regeneration Area (S003), and the Wastewater Treatment System Area (S005) as described in detail below, in order to ensure an absence of subsurface contamination. The Cyanide Storage Shed (S004) does not sit on the ground directly and has a built-in metal containment vault. This will be cleaned and tested by wipe sampling.

(2) Scenario B - Closure to be performed at direction of DTSC

A Scenario B Closure is one directed by the DTSC (or other agency) in which J&B Enterprises has no control and has been removed from the action due to an enforcement order or action, or because J&B Enterprises is unable to complete the required closure for some other reason. The main difference is that all of the hazardous wastes, equipment, and materials will be sent for disposal as hazardous waste without cleaning and none of it re-sold or re-used. This is a straight disposal option and an alternate plan for J&B Enterprises.

a. All of the precious-metal-containing scrap and hazardous waste at the facility at the time of closure will be transported off-site to a permitted facility for reclamation, or alternatively for treatment and disposal. In addition, any other hazardous waste (primarily solder dross) will be placed inside hazardous waste containers and transported to another permitted facility for reclamation, or alternatively for treatment and disposal.

b. Any hazardous waste containers that were not used to transport the wastes listed in section 'a' above for off-site disposal will either be sealed and shipped off-site as "Empty Containers" or will be placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

c. The two double walled metal strip tanks will be crushed or cut up, or simply placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

d. Miscellaneous debris and equipment from hazardous waste storage areas S003 and S005 will be placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

e. The metal concentrator tanks (C-1, C-2, C-3) will be crushed or cut up and containerized, or simply placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

f. The six plastic tanks that are used in the gold precipitation process (T-1 through T-6), will be crushed or cut up and containerized, or simply placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal. The three electrowinning tanks (EW-1 through EW-3) will be handled in the same manner.

g. The miscellaneous facility waste handling equipment (filters, pumps, hosing, and probes) will be placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

h. The miscellaneous equipment and debris from the gold processing area S002 will be removed and placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

i. The metal evaporator tank (E-1) will be crushed or cut up and placed, or simply placed intact, into a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

j. The ventilation piping will be removed and placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal. This item may be completed at an earlier point in the Closure process if convenient.

k. Miscellaneous equipment and residues from the evaporator area (vicinity of E-1) will be removed and placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

l. The facility furnace will be crushed or broken up and placed in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

m. The loading/unloading tray in hazardous waste storage area S002, which is a pre-fabricated metal tray, will be removed from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

n. The portable outside storage area S004 will be transported off-site as hazardous waste to a permitted facility.

o. The waste water treatment tanks, equipment, containers, and debris from S003 and S005 will be crushed or broken up, or placed whole in a roll-off hazardous waste dumpster, pending removal from the facility as hazardous waste to a permitted facility for treatment, recycling, or disposal.

p. Any personal protective equipment, or other miscellaneous items that are used in any of the above described decontamination operations will be containerized and transported off-site as hazardous waste to a permitted facility if it becomes contaminated. The volume of this waste is estimated at less than 200 pounds.

q. Once all of the solid hazardous waste, equipment, and debris has been removed and disposed, the floors and containment areas will be cleaned via power washing. All solid hazardous wastes will be transported from the site to a permitted facility for recycling, treatment, or disposal. All liquid hazardous wastes from cleanup will be either treated and disposed of via sewage or transported from the site to a permitted facility for recycling, or treatment and disposal.

r. In order to verify the complete decontamination of the floors, chip or wipe samples will be collected from the concrete floor in the Solder Dross Storage Area (S001), Gold Recovery Room (S002), Resin Regeneration Area (S003), Wastewater Treatment System Area (S005), the Furnace Room, and the Strip Area, and sent to a DTSC certified hazardous waste testing lab to ensure absence of contamination.

One chip or wipe sample will be collected for each 250 square feet of floor surface in each of those areas. This means that a minimum of 2 chip or wipe samples will be collected from the Solder Dross Storage Area, 8 chip or wipe samples from the Gold Recovery Room, 1 chip or wipe sample from the Resin Regeneration Area, 2 chip or wipe samples from the Wastewater Treatment System Area, 1 chip or wipe sample from the Furnace Room, and 2 chip or wipe samples from the Strip Area.

Lab parameters for all of the chip or wipe samples collected from the facility will include cyanide, copper, nickel, zinc, lead, and silver; except that the cyanide analysis will be omitted from the chip or wipe samples collected in the solder dross storage and Resin Regeneration Areas.

Should the lab analyses indicate that the concrete floor in any of these areas is contaminated; it will be cleaned either by sandblasting, pressure washing, rinsing with bleach and water, or other method, and then re-sampled and tested. In the event that the concrete in any of these areas remains contaminated it will be removed, containerized, and transported as hazardous waste to a permitted off-site facility for disposal or recycling. Any decontamination solutions would be combined and transferred to the wastewater treatment system for additional processing.

s. Subsurface soil samples will be collected from beneath the Solder Dross Storage Area (S001), the Gold Recovery Room (S002), the Furnace Room, the Resin Regeneration Area

(S003), and the Wastewater Treatment System Area (S005) as described in detail below, in order to ensure an absence of subsurface contamination.

See Table 1 " Summary of Sampling for Structures, Equipment, & Building"

(3) Final Sample Collection and Analyses

See Table 1, "Summary of Sampling for Structures, Equipment, & Building" below. The actual number and types of samples, sample locations, and analyses requested will be subject to review and alteration as determined by the DTSC and/or the local regulatory agency overseeing the Closure (e.g. Santa Clara Fire Department, Hazardous Materials Division). The sampling plan will change to reflect found conditions at the time of the Closure. See the Architectural and Engineering Documents Section II, Attachment 5, "Facility Map" for areas and equipment where sampling locations will be selected. The Facility Map shows the location of hazardous waste treatment, storage, and handling, and the location of equipment where samples will be collected as discussed.

Table 1. Summary of Sampling for Structures, Equipment, & Building

All of the sampling locations described in this Closure Plan are noted in the enclosed Closure Plan Confirmation Sampling Location Map.

Scenario A

#'S	Sample Location	Type	Rationale	Parameters	EPA Lab Lab Methods[5]	Prep Method	Est. Detect. Limits
1-2	Strip Tank 0.2 Mg/Wipe #1	Wipe	Hazardous	Cyanide	W/Lab Method		335.2/9010
			Waste Generating Tank	Copper	3050	200.7/6010	2.0 Mg/Wipe
				Nickel	3050	200.7/6010	5.0 Mg/Wipe
				Lead	3020	239.2/7421	0.2 Mg/Wipe
				Silver	3050	200.7/6010	2.0 Mg/Wipe
3-4	Strip Tank 0.2 Mg/Wipe #2	Wipe	Hazardous	Cyanide	W/Lab Method		335.2/9010
			Waste Generating Tank	Copper	3050	200.7/6010	2.0 Mg/Wipe
				Nickel	3050	200.7/6010	5.0 Mg/Wipe
				Lead	3020	239.2/7421	0.2 Mg/Wipe
				Silver	3050	200.7/6010	2.0 Mg/Wipe
5-6	Concentrator 0.2 Mg/Wipe Tank #1	Wipe	Hazardous	Cyanide	W/Lab Method		335.2/9010
			Waste Treatment Tank	Copper	3050	200.7/6010	2.0mg/Wipe
				Nickel	3050	200.7/6010	5.0 Mg/Wipe
				Lead	3020	239.2/7421	0.2 Mg/Wipe
				Silver	3050	200.7/6010	2.0 Mg/Wipe
7-8	Concentrator 0.2 Mg/Wipe Tank #2	Wipe	Hazardous	Cyanide	W/Lab Method		335.2/9010
			Waste Treatment Tank	Copper	3050	200.7/6010	2.0mg/Wipe
				Nickel	3050	200.7/6010	5.0 Mg/Wipe
				Lead	3020	239.2/7421	0.2 Mg/Wipe
				Silver	3050	200.7/6010	2.0 Mg/Wipe
9-10	Concentrator 0.2 Mg/Wipe Tank #3	Wipe	Hazardous	Cyanide	W/Lab Method		335.2/9010
			Waste Treatment Tank	Copper	3050	200.7/6010	2.0mg/Wipe
				Nickel	3050	200.7/6010	5.0 Mg/Wipe
				Lead	3020	239.2/7421	0.2 Mg/Wipe
				Silver	3050	200.7/6010	2.0 Mg/Wipe

5 All extractions of solid samples will be performed via the WET extraction method, as described in Title 22 California Code of Regulations.

#'S	Sample Location	Type	Rationale	Parameters	EPA Lab Lab Methods[6]	Prep Method	Est. Detect. Limits
11-12	Outside 0.2 Mg/Wipe	Wipe	Has Waste	Cyanide	W/Lab Method		335.2/9010
	Storage Bldg S004		Storage	Copper	3050	200.7/6010	2.0 Mg/Wipe
				Nickel	3050	200.7/6010	5.0 Mg/Wipe
				Lead	3020	239.2/7421	0.2 Mg/Wipe
				Silver	3050	200.7/6010	2.0 Mg/Wipe
				Zinc	3050	200.7/6010	2.0 Mg/Wipe
13-14	Furnace 0.2 Mg/Wipe	Wipe	Hazardous	Cyanide	W/Lab Method		335.2/9010
			Waste Tanks				
15-16	Evaporator 0.2 Mg/Wipe	Wipe	Hazardous	Cyanide	W/Lab Method		335.2/9010
	Tank		Waste	Copper	3050	200.7/6010	2.0 Mg/Wipe
			Treatment	Nickel	3050	200.7/6010	5.0mg/Wipe
			Tank	Lead	3020	239.2/7421	0.2 Mg/Wipe
				Zinc	3050	200.7/6010	2.0 Mg/Wipe
				Silver	3050	200.7/6010	2.0 Mg/Wipe
17-18	Concrete	Chip	Hazardous	Silver	3050	200.7/6010	2.0 Mg/Kg
	Floor	or	Waste	Copper	3050	200.7/6010	2.0 Mg/Kg
(Solder Dross Area)		Wipe	Containment	Nickel	3050	200.7/6010	5.0 Mg/Kg
				Lead	3020	239.2/7421	0.2 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg
19-26	Concrete 0.2 Mg/Kg	Chip	Hazardous	Cyanide	W/Lab Method		335.2/9010
	Floor	or	Waste	Copper	3050	200.7/6010	2.0 Mg/Kg
(Gold Recovery		Wipe	Secondary	Lead	3020	239.2/7421	0.2 Mg/Kg
System Room)			Containment	Nickel	3050	200.7/6010	5.0 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg
				Silver	3050	200.7/6010	2.0 Mg/Kg
27	Concrete	Chip	Hazardous	Silver	3050	200.7/6010	2.0 Mg/Kg
	Floor	or	Waste	Copper	3050	200.7/6010	2.0 Mg/Kg
(Resin Regeneration		Wipe	Secondary	Lead	3020	239.2/7421	0.2 Mg/Kg
Area)			Containment	Nickel	3050	200.7/6010	5.0 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg

6 All extractions of solid samples will be performed via the WET extraction method, as described in Title 22 California Code of Regulations. In the case where the lab does not used any of these specific methods, and EPA or equivalent alternate method of analyses will be used.

#'S	Sample Location	Type	Rationale	Parameters	EPA Lab Lab Methods[7]	Prep Method	Est. Detect. Limits
28-29	Concrete 0.2 Mg/Kg	Chip	Hazardous	Cyanide	W/Lab Method		335.2/9010
	Floor	or	Waste	Copper	3050	200.7/6010	2.0 Mg/Kg
	(Wastewater	Wipe	Secondary	Lead	3020	239.2/7421	0.2 Mg/Kg
	Treatment		Containment	Nickel	3050	200.7/6010	5.0 Mg/Kg
	System Area)			Zinc	3050	200.7/6010	20.0 Mg/Kg
				Silver	3050	200.7/6010	2.0 Mg/Kg
30	Concrete 0.2 Mg/Kg	Chip	Hazardous	Cyanide	W/Lab Method		335.2/9010
	Floor	or	Waste	Copper	3050	200.7/6010	2.0 Mg/Kg
	(Furnace Area)	Wipe	Treatment	Lead	3020	239.2/7421	0.2 Mg/Kg
				Nickel	3050	200.7/6010	5.0 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg
				Silver	3050	200.7/6010	2.0 Mg/Kg
31-32	Concrete 0.2 Mg/Kg	Chip	Hazardous	Cyanide	W/Lab Method		335.2/9010
	Floor	or	Waste	Copper	3050	200.7/6010	2.0 Mg/Kg
	(Strip Area)	Wipe	Generation	Lead	3020	239.2/7421	0.2 Mg/Kg
				Nickel	3050	200.7/6010	5.0 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg
				Silver	3050	200.7/6010	2.0 Mg/Kg
33-34	Wastewater 0.2 Mg/Wipe	Wipe	Hazardous	Cyanide	W/Lab Method		335.2/9010
	Tank (WTS-1) 2.0 Mg/Wipe			Waste	Copper	3050	200.7/6010
			Treatment	Nickel	3050	200.7/6010	5.0mg/Wipe
			Tank	Lead	3020	239.2/7421	0.2 Mg/Wipe
				Zinc	3050	200.7/6010	2.0 Mg/Wipe
				Silver	3050	200.7/6010	2.0 Mg/Wipe
34-35	Wastewater 0.2 Mg/Wipe	Wipe	Hazardous	Cyanide	W/Lab Method		335.2/9010
	Tank (WTS-2) 2.0 Mg/Wipe			Waste	Copper	3050	200.7/6010
			Treatment	Nickel	3050	200.7/6010	5.0mg/Wipe
			Tank	Lead	3020	239.2/7421	0.2 Mg/Wipe
				Zinc	3050	200.7/6010	2.0 Mg/Wipe
				Silver	3050	200.7/6010	2.0 Mg/Wipe
35	Final 0.05 Mg/Lit	Water	Hazardous	Cyanide	W/Lab Method		335.2/9010
	Decontamination		Waste	Copper	3050	200.7/6010	0.05 Mg/Lit
	Rinse		Treatment	Nickel	3050	200.7/6010	0.05 Mg/Lit
			Tank	Lead	3020	239.2/7421	0.05 Mg/Lit
			Decon.	Zinc	3050	200.7/6010	0.05 Mg/Lit
				Silver	3050	200.7/6010	0.1 Mg/Lit

7 All extractions of solid samples will be performed via the WET extraction method, as described in Title 22 California Code of Regulations.

Scenario B Sampling Review

#'S	Sample Location	Type	Rationale	Parameters	EPA Lab Lab Methods[8]	Prep Method	Est. Detect. Limits
1-2	Concrete Floor (Solder Dross Area)	Chip or Wipe	Hazardous Waste Containment	Silver	3050	200.7/6010	2.0 Mg/Kg
				Copper	3050	200.7/6010	2.0 Mg/Kg
				Nickel	3050	200.7/6010	5.0 Mg/Kg
				Lead	3020	239.2/7421	0.2 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg
3-10	Concrete 0.2 Mg/Kg Floor (Gold Recovery System Room)	Chip or Wipe	Hazardous Waste Secondary Containment	Cyanide	W/Lab Method		335.2/9010
				Copper	3050	200.7/6010	2.0 Mg/Kg
				Lead	3020	239.2/7421	0.2 Mg/Kg
				Nickel	3050	200.7/6010	5.0 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg
				Silver	3050	200.7/6010	2.0 Mg/Kg
11	Concrete Floor (Resin Regeneration Area)	Chip or Wipe	Hazardous Waste Secondary Containment	Silver	3050	200.7/6010	2.0 Mg/Kg
				Copper	3050	200.7/6010	2.0 Mg/Kg
				Lead	3020	239.2/7421	0.2 Mg/Kg
				Nickel	3050	200.7/6010	5.0 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg
12-13	Concrete 0.2 Mg/Kg Floor (Wastewater Treatment System Area)	Chip or Wipe	Hazardous Waste Secondary Containment	Cyanide	W/Lab Method		335.2/9010
				Copper	3050	200.7/6010	2.0 Mg/Kg
				Lead	3020	239.2/7421	0.2 Mg/Kg
				Nickel	3050	200.7/6010	5.0 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg
				Silver	3050	200.7/6010	2.0 Mg/Kg
14	Concrete 0.2 Mg/Kg Floor (Furnace 0.2 Mg/Kg	Chip or Area)	Hazardous Waste Wipe	Cyanide	W/Lab Method		335.2/9010
				Copper	3050	200.7/6010	2.0 Mg/Kg
				Treatment Lead	3020		239.2/7421
				Nickel	3050	200.7/6010	5.0 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg
				Silver	3050	200.7/6010	2.0 Mg/Kg
15-16	Concrete 0.2 Mg/Kg Floor (Strip Area)	Chip or Wipe	Hazardous Waste Generation	Cyanide	W/Lab Method		335.2/9010
				Copper	3050	200.7/6010	2.0 Mg/Kg
				Lead	3020	239.2/7421	0.2 Mg/Kg
				Nickel	3050	200.7/6010	5.0 Mg/Kg
				Zinc	3050	200.7/6010	20.0 Mg/Kg
				Silver	3050	200.7/6010	2.0 Mg/Kg

8 All extractions of solid samples will be performed via the WET extraction method, as described in Title 22 California Code of Regulations.

4. Quality Assurance/Quality Control Plan:

J&B Enterprises personnel will follow all QA/QC procedures required by each of the analytical test methods used at the facility.

A duplicate, or split, sample will be collected for each decontamination confirmation sample collected as part of the Closure process. These duplicate or split samples will be held at the DTSC certified hazardous waste testing lab, and will only be analyzed if the corresponding sample has questionable results.

One method blank will be submitted to the DTSC certified testing lab for each ten wipe, rinse water, or soil samples collected as part of the Closure process. Additionally, one duplicate sample will be collected and analyzed at a DTSC certified testing lab for every 10 wipe, chip, soil, or rinse water samples collected as part of this project.

One spiked sample and one quality control (blank) sample will be prepared for each 10 chip, wipe, soil, or rinse water samples collected as part of this project. The spiked samples will be analyzed to verify lab recovery rates, while the quality control samples will be analyzed to help ensure that contaminants are not introduced into the samples in the lab. These quality control samples will be prepared in the lab.

E. SAMPLING PLAN AND ANALYTICAL TEST METHODS

1. Soil Sampling Locations

Subsurface soil samples will be collected from the locations listed below. All sampling shall be performed in a biased manner in that samples will be collected from areas of potential contamination. Two soil samples will be collected from each location: a "shallow" sample from near or at the soil surface; and a deeper sample, from a depth of between two and five feet below surface grade.

a. Gold Recovery System Room

The nature of the operations in this area is such that there is minimal likelihood of subsurface contamination; however one or more sampling locations will be selected in this room in areas determined to have the greatest likelihood of contamination. Sampling locations will be chosen in conjunction with the Santa Clara Fire Department, the local agency responsible for Closure and/or the DTSC.

b. Warehouse & Stripping Room

The nature of the operations in this area is such that there is minimal likelihood of subsurface contamination; however one or more subsurface sampling locations will be selected in this room near the strip tanks, in areas determined to have the greatest likelihood of contamination. Sampling locations will be chosen in conjunction with the Santa Clara Fire Department.

c. Furnace Room

The nature of the operation in this area is such that there is minimal likelihood of subsurface contamination; however one or more subsurface sampling locations will be selected in this room in areas determined to have the greatest likelihood of contamination. Sampling locations will be chosen in conjunction with the Santa Clara Fire Department.

d. Solder Dross Storage Area

The nature of the operation in this area is such that there is minimal likelihood of subsurface contamination; however one subsurface sampling location will be selected beneath the former location of the Solder Dross Storage Area. This sampling location will be chosen in conjunction with the Santa Clara Fire Department.

e. Outside Wastewater Treatment System Area

The nature of the operation in this area is such that there is minimal likelihood of subsurface contamination; however one or more subsurface sampling locations will be selected in this area in a location determined to have the greatest likelihood of contamination. Sampling locations will be chosen in conjunction with the Santa Clara Fire Department.

f. Outside Resin Regeneration Area

The nature of the operation in this area is such that there is minimal likelihood of subsurface contamination; however one or more subsurface sampling locations will be selected in this area in any area determined to have a likelihood of contamination. Sampling locations will be chosen in conjunction with the Santa Clara Fire Department.

g. Outside hazardous waste storage shed (S004)

The nature of the operation in this area is such that there is minimal likelihood of subsurface contamination since the shed has a built in steel containment system, and sits above-ground on a base on top of a concrete floor; however one subsurface sampling location will be selected beneath or adjacent to the former location of the outside chemical storage shed. This sampling location will be chosen in conjunction with the Santa Clara Fire Department.

h. Background soil samples

Background soil samples will be collected from a minimum of two locations at the facility with one background sample being collected from a location such as the front or rear parking areas or an isolated office or room inside the building where no hazardous wastes were ever stored or treated. These locations have been selected for the collection of the background soil samples because they are removed from the waste handling, production, and treatment areas and should therefore allow for the assessment of background conditions at the site.

2. Soil Sampling Methods

Soil samples will be collected for chemical analysis at depths of 0-1' and 2'-5' below surface grade. If the laboratory results indicate the soil is contaminated, deeper samples will later be collected until no contamination is found or groundwater is encountered. It is anticipated that all of the soil samples will be collected using a hand auger, due to their near surface location. The sampling method and the depth to groundwater may limit the depth of the

sampling. If groundwater is encountered during sampling, the boring will not be continued, and a grab groundwater sample will be collected and analyzed. All soil samples will be collected from apparent native soil, and not from any sub-floor fill or base material, if possible.

Soil sampling will be accomplished by cutting a 5- 6" diameter hole through the surface concrete floor or asphalt, if necessary. At each sampling location, underlying debris and fill material will be removed using a clean hand trowel, shovel, by gloved hand, or hand-operated auger. After fill material is removed and apparent native soil is encountered, a soil sample will be collected within a brass or stainless-steel sample collection sleeve (liner) contained within the head of a hand-driven soil sampler, by driving the sample collection head into the exposed soil. This sampling method allows undisturbed samples to be collected. After the shallow sample is collected, labeled and documented, the soil boring will be deepened via hand auger to the desired depth, and a second, deeper sample will be collected using the same procedure. Additional samples may be collected from the same boring, if needed.

After each wipe, chip, or soil sample is collected, it will be immediately sealed, and labeled with the date, time, location, and a unique identification, then placed in a chilled cooler for later transport to a state registered hazardous waste testing lab. A chain of custody form will be completed and submitted with the samples.

In order to guard against cross contamination the sampling equipment (i.e. the sampler head and auger) will be decontaminated before each use. In addition, the stainless steel or brass liners used to collect the soil samples will also be cleaned prior to use if they are not provided clean from the laboratory.

3. Analytical Methods

All soil samples will be tested via the following EPA standard or equivalent methods, using the detection limits specified in the standard methods, except as determined necessary by the lab:

Parameter	EPA Prep & Lab Method #s	Typical Detection Limits
pH	EPA 150.1/9040/9045	Not Applicable
Cyanide	EPA 335.2/9010	0.2 mg/kg
Copper	EPA 3050 &200.7/6010	2.0 mg/kg
Nickel	EPA 3050 & 200.7/6010	5.0 mg/kg
Lead	EPA 3020 & 239.2/7421	0.2 mg/kg
Zinc	EPA 3050 & 200.7/6010	2.0 mg/kg
Silver	EPA 3050 & 200.7/6010	2.0 mg/kg

As an exception to this, the subsurface soil sample collected from the former Solder Dross Storage Area will not be subjected to cyanide analysis. Soil sample preparation for heavy metals analysis will be performed by EPA Method 3020 or 3050. In the event that metals contamination is discovered at levels exceeding the soluble hazardous waste criteria in Title

22 by a factor of 10, the sample will be re-extracted by the WET Extraction Procedure method as identified in Title 22, and re-analyzed for the parameter(s) in question by the same lab method(s) to determine soluble metal content.

4. Quality Assurance/Quality Control Plan

J&B Enterprises and/or their contractor will follow all QA/QC procedures required by each of the analytical test methods used at the facility. For each soil sample collected as part of the Closure process, a portion of each sample will be saved at the lab for a minimum of 30 days, and will only be analyzed if the corresponding sample has questionable results, or additional analyses are needed.

F. CLOSURE COST ESTIMATE

This cost estimate was revised in March 2011, the date of the annual revision, and is based on the cost of disposal for the maximum amount of waste that can be handled or stored at the facility at any given time, and on a worst case scenario which assumes that no additional on-site waste treatment is possible, and that all decontamination activities are performed by trained off-site personnel, as is required under the regulations. This cost estimate is based upon Closure Scenario B, the DTSC directed Closure process. See Attachment 1, "2011 Annual Financial Assurance Mechanism & Closure Cost Update" J&B Enterprises, March 21, 2011.

G. CLOSURE CERTIFICATION

A Closure certification will be submitted within 60 days of completing all closure activities. This certification will be signed by the owner/operator and an independent engineer that is registered in California. The closure certification shall contain the following:

1. Identification of the personnel or companies that were responsible for supervision of closure activities at the site, including waste transportation and sample collection.

2. A brief summary of each closure activity.

3. Field Engineers observation reports.

4. Sampling data and analysis.

5. Review and discussion of analytical results.

6. Copies of all hazardous waste manifests.

7. Description of any modifications/amendments that were made to the closure plan.

8. Photographs.

H. EQUIPMENT RELOCATION AND MINOR FACILITY MODIFICATIONS

In the event that it becomes necessary to relocate any of the existing equipment to another location within the current facility, the Closure procedures will include the following:

1. Assessment of hazardous waste removal and decontamination needs, and

2. Assessment of Closure compliance requirements.

Prior to relocating any existing piece of equipment within the facility (including tanks, containment trays, or treatment processes) the equipment to be moved will be emptied of all free flowing liquid, either by pumping, pouring, or some combination thereof. The liquids removed will be held on-site in labeled containers or tanks as appropriate, until the equipment relocation project has been completed, at which point it will be transferred back to the treatment equipment for further processing. Additionally, the exterior of the equipment to be relocated will be cleaned sufficiently to allow for safe handling during the moving and installation processes.

Following the completion of the equipment relocation portion of the project, the floor in the area of the former equipment will be inspected and cleaned as necessary to ensure an absence of contamination. Such cleaning, if necessary, would be performed by sandblasting, power washing or other such method that would be sufficient to remove hazardous waste residues.

A complete equipment decontamination will not be required for a simple relocation project within the existing facility, since the equipment to be moved will be used in an identical manner as previously, and there will be no need to transport the equipment on a public road. Therefore, the complete decontamination of the relocated equipment would serve no useful purpose. However, the equipment will be cleaned sufficiently to allow for its' safe handling during both the relocation and installation portions of this project.

During the equipment relocation and installation process there will be at least one designated employee of J&B Enterprises present at the site, to help ensure that any hazards present are identified and that unreasonable exposure risks are not taken.

Closure certification requirements for these equipment relocation operations will be determined on a case by case basis, in conjunction with the DTSC and Santa Clara Fire Department, the Local Agency as warranted.

SECTION IX – ATTACHMENT 1

"2011 Annual Financial Assurance Mechanism & Closure Cost Update" for J&B Enterprises, dated March 21, 2011

6 pages total

2011 ANNUAL FINANCIAL ASSURANCE MECHANISM

&

CLOSURE COST UPDATE

For

J&B ENTERPRISES

CAD 982052797

Updated
March 21, 2011

Prepared by: John Schultz, CEMS
Tel. 650.966.1526

March 21, 2011

Mr. Keith Kihara
Financial Assurance Unit
Department of Toxic Substances Control
Enforcement and Emergency Response Program
8800 Cal Center Drive
Sacramento, CA 95826-3200

Subject: 2011 Financial Assurance Mechanism for Closure Costs for J&B Enterprises

Dear Mr. Kihara:

J&B Enterprises (J&B), CAD 982052797, is providing the Department with an updated copy of J&B's Closure Cost estimate and proof of their financial assurance fund. J&B operates by DTSC authorization under the Standardized Permit and uses a Certificate of Deposit (CD) as an approved alternative financial mechanism to ensure the availability of Closure funds.

J&B is again making an annual addition to their Closure Fund under an approved 10-year schedule, and will reach the full funding level by March 2012. As required by regulations, J&B has increased this years estimated closure fund by the current net inflation factor (NIF) of 1.010

The NIF was determined by going to the U.S. Department of Commerce's, Bureau of Economic Analyses (BEA) website and reviewing Table 1.1.9, *"Implicit Price Deflators for Gross Domestic Product"*, dated February 25, 2011, the most current revision of the table available at the time of completing the calculations. The Net Inflation Factor (NIF) was calculated by dividing the Annual 2010 GDP (109.761) by the Annual 2009 GDP (108.483); this provided a Net Inflation Factor (NIF) of *1.010.*

As per your letter of January 24, 2011, we have corrected how we are calculating the pay-in period. The payment amount was determined by taking the current closure cost estimate (2010) in the amount of $94,4586.87 times the inflation factor (1.010), minus the current value of the CD ($80,974.10), divided by the number of years remaining in the pay-in period (two). The amount to be deposited on the CD anniversary (March 21, 2011) is $7,207.64. This has been done; please see the attached photocopy of the deposit receipt. With this deposit, the amount in the CD should be equal to, or in excess, of $88,181.74.

Please check over my calculations and confirm that they are correct. If there is any error, please let us know immediately. Please note, that next year, 2012, the fund should be fully funded.

Sincerely,

John Schultz, R.E.A.
Environmental Consultant for J&B Enterprises

cc: Ken Epsman/J&B Enterprises

REVIEW OF EXISTING ALTERNATIVE FINANCIAL ASSURANCE MECHANISM

Revision Date: March 22, 2011

Facility Name: **J&B Refining dba J&B Enterprises**
Facility Location: 1650 Russell Avenue, Santa Clara, CA 95054
Facility ID Number: CAD 982052797
Closure Cost Estimate (for 2010): $94,486.87
NIF for 2010 Calculation: 1.010
New Closure Fund estimate (for 2011): $95,389.37
Post-Closure Cost Estimate: $0
New current balance of fund (as of March 22, 2011): $80,974.10+

Issuing Agency Name: Bank of America
Account No.: 01562-04831
Bank Location: Willow Glen Branch, 1245 Lincoln Avenue, San Jose, CA 95125
Contact Name/Telephone Number: The Business Banking Officer (408) 277-7121

Review of Alternative Financial Assurance Mechanism: In order to ensure the availability of Closure funds, J&B Enterprises has a Certificate of Deposit (CD) with the Bank of America. This CD will be reinvested on or about the annual renewal date of March 31 of each year, for a 12-month term. Additional funds will be added to the closure CD at the renewal time to cover the annual payment to the fund plus the cost of living inflation increase.

Should it be determined that the account contains funds in excess of those required for facility Closure, J&B Enterprises will petition the DTSC for a release of funds and a reduction in the account balance. Should the DTSC determine that the account is not sufficiently funded, J&B Enterprises will increase the amount of the CD appropriately. Should J&B and the DTSC determine there is an excess of funding, the account will be decreased appropriately.

John Schultz, REA
For
J&B Enterprises

CLOSURE COST ESTIMATE

1.	**Waste Removal Expenses**	**$ 57,515**

(This includes all hazardous waste profiling, packaging, labeling, manifesting, loading, transportation, and disposal/recycling/treatment expenses. Chemically compatible liquid hazardous wastes will be transported from the facility in bulk.)

a.	Solder Dross (26-55 Gal Drums) ($135/Drum)	$ 3,510
b.	Precious Metal Containing "Waste" Solution Process Waste (9,945 Gals) ($3.50/Gal)	$ 34,808
c.	Non-Precious Metal Waste Solutions Wastewater Solutions (3,000 Gals) ($3/Gal) Decontamination Rinses (280 Gals) ($3/Gal)	 $ 9,000 $840
d.	Waste Residues Evaporator Solids (4-55 Gal Drums) ($455/Drum + $300 Trans) Filter Cake (4-55 Gal Drums) ($300/Drum)	 $ 1,200
e.	Solid Waste Waste Transportation/Disposal (7.3 Tons) ($690/Ton) Waste Packaging (40 Man Hrs X $25/Hr)	 $ 5,037 $ 1,000

2.	**Decontamination Expenses**	**$ 2,525**
a.	Hazardous waste containerization - tanks, containers, misc. 40 man-hours @ $25/hour 20 man-hours @ $45/hour - Supervisor	 $ 1,000 $ 900
b.	Structures/Building - sandblasting or steam cleaning of base floor in gold recovery, Furnace Room, and solder dross areas; as well as the outside wastewater treatment and resin regeneration areas. 16 man-hours @ $25/hour 5 man-hours @ $45/hour - Supervisor	 $ 400 $ 225

3.	**Sampling And Lab Analyses Expenses**	**$ 7,310**
a.	Structures/Building Decontamination Verification 16 concrete chip or wipe samples (analytical parameters vary) $ 1,790 5 man-hours sampling @ $60/hour	 $ 300

b.	Subsurface Soil Verification	
	18 samples from 9 borings (parameters vary)	$2,110
	12 man-hours sampling @ $60/hour	$ 720
	Concrete coring	$ 500
c.	Quality Control Samples (blanks & duplicates)	
	4 concrete chip or wipe samples (analytical parameters vary)	$ 600
	2 soil samples (pH, CN, Cu, Ni, Pb, Zn, Ag)	$ 270
	2 man-hours sampling @ $60/hour	$ 120
d.	Sampling Report	$ 900
	12 man-hours sampling @ $75/hour	
4.	**Closure Certification Expenses**	**$2,800**
a.	Certification preparation, clerical	
	10 man-hours @ $40/hour	$ 400
b.	Certification preparation, technical	
	15 man-hours @ $70/hour	$ 1,050
c.	Registered engineer inspection and review	
	15 man-hours @ $90/hour	$ 1,350
Closure Subtotal (Sections 1 - 4)		($ 70,150)
Contingency Factor (20%)		($ 14,030)

NOTE: PREVIOUS CLSOURE COST ESTIMATES WITH INFLATION ADJSUTMENT
(Years 2001 – 2004 not shown)

REVISED CLOSURE TOTAL 2005	$ 84,180.00
REVISED CLOSURE TOTAL 2006	$ 86,705.40
REVISED CLOSURE TOTAL 2007	$ 89,219.85
REVISED CLOSURE TOTAL 2008	$ 91,536.57
REVISED CLOSURE TOTAL 2009	$93,458.83
REVISED CLOSURE TOTAL 2010	$94,486.87
REVISED CLOSURE TOTAL 2011	$95,389.37

	2009	2010			2010 NIF
GDP	109.615	110.662			**1.010**
		NIF			
current closure cost est of 2010	$	**94,486.87**	1.01	$ 95,389.37	(new clos cost est. for 2011)
current CD (12/31/10)				$ 80,974.10	
Difference				$ 14,415.27	
divded by no. of periods remaining (2) (year 2011 and2012)				**$ 7,207.64**	= amount deposit in CD by 3/21
New balance after deposit:				**$ 88,181.74**	

formula*: (Current closure cost est. times NIF) minus Current value of CD =amount due
(divided by no. years remaining in pay-in period)

(* Source: K Kihara, DTSC,correspondence of 1/24/11)

STANDARDIZED PERMIT APPLICATION

SECTION X - CERTIFICATIONS

For

J&B ENTERPRISES
CAD 982052797

July 1, 2011

SECTION X

CERTIFCATIONS

SECTION X – CERTIFICATIONS

Attached are the Owner / Operator certifications for the following portions of the Standardized Permit application:

SECTION		Page
1.	Security	2
2.	Location, Seismic and Precipitation Information	3
3.	Manifest System, Record Keeping, and Reporting	4
4.	Preparedness and Prevention	14

The facility owner/operator has read and understands the requirements identified in the certification guidance materials, and maintains the records that demonstrate compliance with the certified portions of the application. Only the signed certifications are to be submitted with the application package.

1. SECURITY

I hereby certify the following:

1. I have read and understood Sections 66264.14, and 66270.14(b)(4), Title 22 of the California Code of Regulations (Security).

2. The security procedures and equipment for my facility will be in compliance with these regulations.

3. I understand that this certification is an integral part of the formal application for a falsification is equivalent to a false statement under Health and Safety Code Section 25191 and may be grounds for a permit denial.

Printed Name: Ken Epsman

Signature: _____

Date _____

Facility Address: 1650 Russell Ave., Santa Clara, CA 95054

A. Security (Information Only)

The Applicant shall prevent unauthorized entry onto the facility. This is to ensure adequate protection against potential hazards to human health, domestic livestock or wildlife. Signs are used to alert employees and visitors of possible dangers within a designated area. Fences or other barriers are used to control access of wildlife, livestock, and unauthorized persons.

B. Security Measures

The following security measures have been taken:

1. The facility is surrounded by a fence kept in good repair.
2. The fence is a 10' high chain-linked fence secured with electronically controlled gates.

C. Signs

"Hazardous Waste Area" signs are posted in a conspicuous manner at each entrance to the facility. Additionally, "Hazardous Waste Area" signs have been placed around the perimeter of the facility such that at least one sign is visible from any point of approach to the facility. The signs are written in English, Spanish and in any other language predominant in the area of the facility. The exact wording is as follows: "Danger Hazardous Waste Area-Unauthorized Personnel Keep Out". These signs are legible from a distance of 25 feet.

Signs are posted within the facility, in the areas where hazardous waste is managed. Additional signs are posted at the area where wastes generated from any recycling operation are stored. The signs required within the facility are as follows:

1. "No Smoking Area"
2. Safety equipment: The facility is equipped with a variety of personal protective equipment, fire sprinklers, alarms, emergency eyewash/deluge shower, and so on. See the Written Safety Plan and the Emergency Response Plan for details.

D. LIghting

During hours of darkness, sufficient artificial lighting is provided at the facility to ensure safe and effective operation. Describe the type of lighting, location of the lighting, and wattage, both indoors and outdoors.

E. Artificial Light

Artificial lighting at the facility will be used for the following purposes:

1. To handle hazardous waste during indoor and/or night operations.
2. For emergency response after daylight hours.
3. For security measures.

2. FACILITY LOCATION, SEISMIC AND PRECIPITATION INFORMATION

I hereby certify the following:

1. I have read and understood Sections 66264.25 and 66270.14(b)(11), Title 22, of the California Code of Regulations on Facility location, Seismic and Precipitation Information.

2. I certify that the nearest fault to my facility is Berryessa and Hayward Faults and is 10.5 miles away my facility.

3. I certify that my facility is not in the 100-year flood plain; otherwise I will provide the information required under section 66270.14 (b)(11)(D).

4. I understand that this certification is an integral part of the formal application for a Standardized Permit for my facility and that any falsification is equivalent to a false statement under Health and Safety Code Section 25191 and may be grounds for a permit denial.

Printed Name: Ken Epsman, President

Signature: _____

Date _____

Facility Address: 1650 Russell Ave., Santa Clara, CA 95054

FACILITY LOCATION / SITING INFORMATION

1. Flood Plains

The facility is not located in a 100-year. Included as part of our facility operation plan a Federal Flood Insurance Administration Flood Map in Section II, Attachment 4.

2. Distance from Holocene Faults

The facility is not located within 3,000 of a Holocene fault according to the California Department of Mines and Geology.

3. Precipitation Design

All cover and drainage control systems are designed to function without failure when subjected to a 24-hour probable maximum precipitation storm.

3. MANIFEST SYSTEM, RECORD KEEPING AND REPORTING

I hereby certify the following:

1. I have read and understood sections 66264.70 through 66264.78, Title 22, of the California Code of Regulations on Manifest System, Record Keeping and Reporting requirements. I will have or prepare, for my facility, the required records and reports to be in compliance with all applicable regulations.

2. I certify that a copy of the required records or reports will be maintained at my facility and will be available to local, state or federal agencies upon request. I understand that this certification is an integral part of the formal application for a standardized permit for my facility. And that any falsification is equivalent to a false statement under Health and Safety Code section 25191 and may be grounds for a permit denial.

3. My facility is (or is not) an offsite facility. I have sent a notice to generators that may use my facility's services and I have the appropriate permit(s) (section 66264.12(b)). A copy of my notice is kept in my facility.

Printed Name: Ken Epsman, President

Signature: _____

Date _____

Facility Address: 1650 Russell Ave., Santa Clara, CA 95054

MANIFESTING (Information Only)
Chapter 12, Article 2 requires hazardous waste generators to use a hazardous waste manifest. Chapter 14, section 66264.71 requires facilities that receive manifested wastes to process the manifest in specified ways.

A standardized permit facility may be involved in manifesting from two different aspects:

- All hazardous wastes being transported from the original generator to the facility for storage and/or treatment are accompanied by a manifest or other form of shipping paper.

- If the facility sends any hazardous wastes to another facility for treatment or disposal, the facility is the generator of that waste. The waste is accompanied by a manifest or other form of shipping paper.

Manifesting – Generators Responsibilities
At a minimum, a generator (i.e. either an original producer or a facility shipping waste to another facility) must complete Items 1 through 16 of the manifest. These items cover the generator's identification number, mailing address, phone number; the transporter's name and identification number; and the name, address and identification number of the facility designated to receive the waste. The generator may indicate an alternate facility in Item 15. In addition, the generator must provide the Department of Transportation (DOT) description of the waste (including proper shipping name, hazard class, identification number and technical description), number and type of containers, total quantity and volumetric measurements. The DOT information required on the manifest can also satisfy federal DOT hazardous materials shipping document requirements.

The generator must sign the manifest for it to be certified. The generator must also ensure that the transporter signs and dates the manifest upon acceptance of the waste. The generator must retain one copy of the manifest for three years or until a signed copy is received from the destination facility, in which case this copy is retained for three years. The remaining copies of the manifest are given to the transporter

Unconfirmed Manifests – Generator's Responsibilities
If a generator does not receive a copy of the manifest from the destination facility within 35 days of the date the waste was accepted by the initial transporter, the generator must contact the transporter and/or the facility to determine the status of the waste. If the generator still has not received a copy of the manifest within 45 days, the generator must send an Exception Report to DTSC describing the actions being taken to resolve the situation, along with a copy of the relevant manifest.

Requirements for Rail and Water Shipments – Generators Responsibilities
If waste is being transported from the site of generation solely by rail, the generator must send at least three copies of the properly completed, dated and signed manifest to the designated facility. If the waste will initially be transported by rail, then transferred to a non-rail carrier, the generator must send at least 3 copies of the signed and completed manifest to the first non-rail transporter. If the waste is being transported from the United States by mail, the generator must send at least

three copies of the signed and completed manifest to the last rail transporter that handles the waste in the United States.

If the hazardous waste is being shipped within the United States solely by water, the generator must send three copies of the properly completed, dated and signed manifest to the designated facility. If the waste is being exported from the United States, the generator must send 3 copies of the completed and signed manifest to the last water transporter that handles the waste in the United States.

Facility Acceptance of Manifested Wastes

A facility is permitted by DTSC to accept the type of waste designated on the manifest. The facility owner or operator (or his agent) is required to verify that the information on the manifest is correct by signing and dating the manifest at Item 20. The facility must give at least one signed copy of the manifest to the transporter and send a signed copy of the manifest to the generator and to DTSC within 30 days of the receipt of the hazardous waste. A copy of the manifest is retained at the facility for three years from the date the hazardous waste is received.

Manifest Discrepancies – Facility Responsibilities

If there is a significant discrepancy between the waste received and the waste designated on the manifest, the differences is recorded at item 19 on the manifest. A significant discrepancy is any variation (greater than 10% for bulk or any variation for piece count for batch waste) in the type or quantity of waste reported on the manifest and the type or quantity actually received. The facility must make a note on the manifest and attempt to resolve the discrepancy by contacting the generator and/or the transporter. If the discrepancy is not resolved within 15 days after receipt of the waste, the facility must send a letter describing the discrepancy and actions taken to resolve it, along with a copy of the relevant manifest, to DTSC.

In addition, any facility that accepts waste not accompanied by a manifest is required to submit an Un-manifested Waste Report. The identification numbers, names and addresses of all known handlers of the un-manifested waste should be included in the report, as well as reasons for the lack of a manifest (if known) and the methods used to treat or store the waste.

Exporting Hazardous Waste

Before hazardous waste can be exported out of the United States, a Notification of Intent to Export would be submitted to DTSC, and, if the waste is a RCRA waste, to the U.S. EPA. See Title 22, CCR, Chapter 12, Article 5, for details.

Very Small Quantity Load Transportation

Up to 5 gallons or 50 pounds of a hazardous waste may be transported without a manifest by the generator of that waste to an authorized hazardous waste management facility. The generator must comply with the following:

Wastes are transported in closed containers that prevent spills. Wastes are not mixed within a container during transportation.

If the waste is from a business, it may not be extremely hazardous waste.

The generator must not generate more than a cumulative total of 100 kilograms (220 pounds) of hazardous waste in any month.

The generator does not accumulate more than 1,000 kilograms (2,200 pounds) of hazardous waste at any time.

Milk Run Transportation

Certain specified hazardous waste may be transported using a modified manifesting procedure wherein one manifest covers all the waste a driver transports in one day. The waste is transported by a registered transporter. The transporter must apply for a Transporter Regulatory Exemption (DTSC 8463). See sections 66263.41(d) and 66263.42 for details. SMALL LOAD OPERATIONS

Subject to certain restrictions, up to 100 kilograms (220 pounds) per load and 1,000 kilograms (2,220 pounds) per month may be transported without using a manifest and without being transported by a registered transporter. Instead, a shipping paper (bill of lading) must accompany the waste. The transporter must apply for a Transporter Regulatory Exemption (DTSC 8463). See sections 66263.41(d) and 66263.46 for details.

Used Oil

Used oil may be transported to a transfer facility or from a transfer facility to a permitted treatment facility using a modified manifest procedure similar to a milk run, except that the transporter need not apply for a Transporter Regulatory Exemption and the individual used oil generators do not have to have Identification Numbers. See Health and Safety Code section 25250.8 for details.

RECORD KEEPING

Unless otherwise specified, the following records, reports, documents, amendments, revisions and any modifications to the facility is maintained at the facility until closure is completed. The documents listed below are maintained at the facility and is accessible at all times to operating personnel and available for inspection by any representative of DTSC or any other agency with appropriate statutory authority. The retention period for these records is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by DTSC.

- Standardized Permit Document, and/or documentation of any form(s) of authorization to operate the facility.
- Operating records (section 66264.73).
- Training records for current employees (section 66264.16).
- Waste analysis plan (section 66264.13).
- Contingency plan (section 66264.53).
- Closure plan (section 66264.112).
- Closure cost estimates (section 66264.142) and financial responsibility documents.
- Inspection schedules (section 66264.15).
- Copies of the confirmation to the generator that the facility has the authorization for and will accept the waste the generator is shipping (section 66264.12).

The following records are retained for three years: Inspection records (section 66264.15).

- Training records for employees, including former employees (section 66264.16).
- Copy of each manifest received (section 66264.71).

For generators with milk run or small load operations agreements (per section 66263.42 or 66263.46), copies of all notifications, certifications and waste analysis data for compliance with all land disposal restriction requirements (section 66268.7).

The following records are retained for five years:

- For generators who use the regular manifest procedures, copies of all notifications, certifications and waste analysis data for compliance with land disposal restriction requirements (section 66268.7).

1. **OPERATING RECORD** (section 66264.73):

The operating record must include the information discussed below. The operating record is kept up-to-date at all times.

a. Record of each hazardous waste received, and the method(s) and date(s) of its transfer, treatment or storage at the facility. Use the handling codes specified in Appendix I of Chapter 14, title 22.

b. The location and quantity of each hazardous waste within the facility cross-referenced to the number of the specific manifest under which that waste was accepted.

c. Records of all required waste analyses (sections 66264.13, 66264.193, 66268.7).

d. The reports from all incidents that required implementation of the contingency plan (section 66264.56).

e. Inspection records (section 66264.15).

f. All closure cost estimates (section 66264.142). Note that these are updated annually based on facility operations and on the inflation factor information provided by the Implicit Price Deflator for Gross National Product published by the U. S. Department of Commerce in its Survey of Current Business.

g. All land disposal restriction documents (66268.7).

REPORTING

24-Hour Reporting

The owner or operator will report to DTSC any noncompliance that may endanger health or the environment. Information will be provided verbally within 24 hours from the time the owner/operator becomes aware of the noncompliance.

The following are reported verbally within 24 hours to the appropriate regional DTSC office:

- Information concerning any release of hazardous waste that may endanger public drinking water supplies.

- Any information of any release or discharge of hazardous waste, or of fire or explosion from the facility, that could threaten the environment or human health outside the facility. The description of the occurrence and its cause will include:

- Name, address, and telephone number of the owner or operator. Name, address, and telephone number of facility.

- Date, time, and type of incident.

Name and quantity of material(s) involved. The extent of injuries, if any.

- An assessment of actual or potential hazard to the environment and human health outside the facility, where this is applicable.

- Estimated quantity and disposition of recovered material that resulted from the incident.

- A written submission will also be provided within fifteen (15) days of the time the owner/operator becomes aware of the circumstances. The written submission will contain a description of the noncompliance and its cause; the periods of noncompliance (including exact dates and times), and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance

Annual Report

Operator will prepare and present to DTSC, upon request, one copy of an Annual Report. The report will be on the form designated by DTSC and will be completed and submitted to DTSC by March 1 of each year. As a courtesy, DTSC will notify facilities and make the report forms available, prior to that date. The report will include the following information:

- The total volume of the hazardous waste managed at the beginning and end of the preceding calendar year.

- The total volume of hazardous waste received during the preceding calendar year.

The total volume of hazardous waste recycled during the preceding calendar year, itemized as follows:

1. Prepared for reuse as original product.

2. Consumed in the process of preparing for reuse, including waste generated.

3. Prepared for reuse other than as original product, specifying each type of other use.

4. Not recycled but transported off-site. (5) Any other information DTSC may require.

4. PREPAREDNESS AND PREVENTION

I hereby certify the following:

1. I have read and understood Sections 66264.30 through 66264.35, 66264.37, and 66270.14(b)(8) and (b)(9), Title 22 of the California Code of Regulations (Preparedness and Prevention).

2. The procedures and equipment for my facility will comply with these regulations. My facility will be designed, constructed, maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constitutes to air, soil, or surface water which could threaten human health or the environment.

3. I understand that this certification is an integral part of the formal application for a Standardized Permit for my facility and that any falsification is equivalent to a false statement under Health and Safety Code Section 25191 and may be grounds for a permit denial.

Printed Name: Ken Epsman, President

Signature: _____

Date _____

Facility Address: 1650 Russell Ave., Santa Clara, CA 95054

PREPAREDNESS AND PREVENTION

Article 3. Preparedness and Prevention

§66264.30. Applicability.
The regulations in this article apply to owners and operators of all hazardous waste facilities, except as section 66264.1 provides otherwise.

§66264.31. Design and Operation of Facility.
Facilities shall be located, designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

§66264.32. Required Equipment.
All facilities shall be equipped with the following, unless it can be demonstrated to the Department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below:

(a) an internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;

(b) a device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;

(c) portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and

(d) water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

§66264.33. Testing and Maintenance of Equipment.
All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained as necessary to assure its proper operation in time of emergency.

§66264.34. Access to Communications or Alarm System.
(a) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation shall have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless the Department has ruled that such a device is not required under section 66264.32.

(b) If there is ever just one employee on the premises while the facility is operating, the employee shall have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless the Department has ruled that such a device is not required under section 66264.32.

§66264.35. Required Aisle Space.
The owner or operator shall maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it is demonstrated pursuant to section 66270.14(b)(6) to the Department that aisle space is not needed for any of these purposes.

SECTION XI

FINANCIAL RESPONSIBILITY FOR STANDARDIZED PERMIT

STANDARDIZED PERMIT APPLICATION

SECTION XI – FINANCIAL RESPONSIBILITY

For

J&B ENTERPRISES
CAD 982052797

July 1, 2011

SECTION XI – FINANCIAL RESPONSIBILITY FOR STANDARDIZED PERMIT FACILITIES

J&B Enterprises has established two types of financial responsibility and will maintain them until the facility has been certified closed at some future date:

A. CLOSURE ASSURANCE

A financial assurance mechanism was established .

B. SUDDEN AND ACCIDENTAL LIABILITY: Liability coverage is required to make sure there is enough money available to deal with any accidents or upsets at the facility. There are set amounts of liability unique to standardize permit facilities; the Series B, C and Small-Quantity C levels are significantly less than those required for a facility with a full permit. The amounts are specified in existing section title 22, section 67800.5 (which will become new section 66270.69.4 in the proposed regulations):

1. Series A $1 million per occurrence/$2 million annual aggregate

2. Series B $500,000 per occurrence/$1 million annual aggregate

3. Series C $300,000 per occurrence/$600,000 annual aggregate

4. Series Small-Quantity C $100,000 per occurrence/$200,000 annual aggregate

ACORD

CERTIFICATE OF LIABILITY INSURANCE

9/27/2011

DATE (MM/DD/YYYY) 9/27/2010

PRODUCER
Lockton Insurance Brokers, LLC
CA License #0F15767
Two Embarcadero, Suite 1700
San Francisco 94111
(415) 568-4000

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED
J&B Enterprises
108198 1650 Russell Avenue
Santa Clara CA 55054

INSURERS AFFORDING COVERAGE		NAIC #
INSURER A:	American International Specialty Lines Insurance Co.	26883
INSURER B:	Commerce and Industry Insurance Company	19410
INSURER C:	National Union Fire Ins Co Pittsburgh PA	19445
INSURER D:		
INSURER E:		

COVERAGES JBENT01 OH

THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

LTR	ADD'L INSRD	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	LIMITS	
		GENERAL LIABILITY				EACH OCCURRENCE	$ 1,000,000
		X COMMERCIAL GENERAL LIABILITY	2507136	9/27/2010	9/27/2011	DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 1,000,000
		CLAIMS MADE X OCCUR				MED EXP (Any one person)	$ 5,000
		X EBL $1M/1M				PERSONAL & ADV INJURY	$ 1,000,000
		X EBL Ded $1K				GENERAL AGGREGATE	$ 2,000,000
		GEN'L AGGREGATE LIMIT APPLIES PER: POLICY PRO-JECT LOC				PRODUCTS - COMP/OP AGG	$ 2,000,000
		AUTOMOBILE LIABILITY	CA6650444	9/27/2010	9/27/2011	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
		ANY AUTO					
		X ALL OWNED AUTOS				BODILY INJURY (Per person)	$ XXXXXXX
		SCHEDULED AUTOS					
		X HIRED AUTOS				BODILY INJURY (Per accident)	$ XXXXXXX
		X NON-OWNED AUTOS					
		X Physical Damage				PROPERTY DAMAGE (Per accident)	$ XXXXXXX
		X Comp & Coll Ded $2K					
		GARAGE LIABILITY	NOT APPLICABLE			AUTO ONLY - EA ACCIDENT	$ XXXXXXX
		ANY AUTO				OTHER THAN AUTO ONLY: EA ACC	$ XXXXXXX
						AGG	$ XXXXXXX
		EXCESS/UMBRELLA LIABILITY	2507160	9/27/2010	9/27/2011	EACH OCCURRENCE	$ 5,000,000
		OCCUR CLAIMS MADE				AGGREGATE	$ 5,000,000
		X UMBRELLA FORM					$ XXXXXXX
		DEDUCTIBLE					$ XXXXXXX
		RETENTION $					$ XXXXXXX
		WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N	3429862	9/27/2010	9/27/2011	X WC STATU-TORY LIMITS OTH-ER	
		ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? N (Mandatory in NH) If yes, describe under SPECIAL PROVISIONS below				E.L. EACH ACCIDENT	$ 1,000,000
						E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
						E.L. DISEASE - POLICY LIMIT	$ 1,000,000
		OTHER Pollution Legal Liability	2507136	9/27/2010	9/27/2011	$1,000,000 $25,000 Deductible	

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/EXCLUSIONS ADDED BY ENDORSEMENT/SPECIAL PROVISIONS
Evidence of coverage.

CERTIFICATE HOLDER
3725891
Evidence Only

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

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ACORD™ CERTIFICATE OF PROPERTY INSURANCE

9/27/2011

DATE 9/27/2010

PRODUCER
Lockton Insurance Brokers, LLC
CA License #0F15767
Two Embarcadero, Suite 1700
San Francisco 94111
(415) 568-4000

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COMPANIES AFFORDING COVERAGE

COMPANY A: Firemans Fund

COMPANY B:

COMPANY C:

COMPANY D:

INSURED
00316
J&B Enterprises
1650 Russell Avenue
Santa Clara CA 55054

COVERAGES JBENT01 OH

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE NAMED INSURED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN HAVE BEEN REDUCED BY PAID CLAIMS.

TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION DATE (MM/DD/YY)	COVERED PROPERTY	LIMITS
X PROPERTY	MX193010669	9/27/2010	9/27/2011	X BUILDING	$ 1,800,000
CAUSES OF LOSS				X PERSONAL PROPERTY	$ 450,000
BASIC				X BUSINESS INCOME	$ 3,000,000
BROAD				X EXTRA EXPENSE	$ Included
X SPECIAL				BLANKET BUILDING	$ XXXXXXX
EARTHQUAKE				BLANKET PERS PROP	$ XXXXXXX
FLOOD				BLANKET BLDG & PP	$ XXXXXXX
X $5K Deductible					$ XXXXXXX
					$ XXXXXXX
INLAND MARINE					$ XXXXXXX
TYPE OF POLICY	NOT APPLICABLE				$ XXXXXXX
					$ XXXXXXX
CAUSES OF LOSS					$ XXXXXXX
NAMED PERILS					$ XXXXXXX
OTHER					$ XXXXXXX
CRIME					$ XXXXXXX
TYPE OF POLICY	NOT APPLICABLE				$ XXXXXXX
					$ XXXXXXX
BOILER & MACHINERY	NOT APPLICABLE				$ XXXXXXX
					$ XXXXXXX
OTHER					

LOCATION OF PREMISES/DESCRIPTION OF PROPERTY
1650 Russell Avenue
Santa Clara CA 95054

SPECIAL CONDITIONS/OTHER COVERAGES
Agreed Amount, Replacement Cost.

CERTIFICATE HOLDER
103049
Evidence Only

CANCELLATION
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING COMPANY WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE