BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

BOARD OF DIRECTORS
REGULAR MEETING
May 1, 2013

A meeting of the Bay Area Air Quality Management District Board of Directors will be held at 9:45 a.m. in the 7th Floor Board Room at the Air District Headquarters, 939 Ellis Street, San Francisco, California.

Questions About an Agenda Item

The name, telephone number and e-mail of the appropriate staff Person to contact for additional information or to resolve concerns is listed for each agenda item.

Meeting Procedures

The public meeting of the Air District Board of Directors begins at 9:45 a.m. The Board of Directors generally will consider items in the order listed on the agenda. However, any item may be considered in any order.

After action on any agenda item not requiring a public hearing, the Board may reconsider or amend the item at any time during the meeting.

This meeting will be webcast. To see the webcast, please visit http://www.baaqmd.gov/The-Air-District/Board-of-Directors/Agendas-and-Minutes.aspx at the time of the meeting.

Public Comment Procedures

Persons wishing to make public comment must fill out a Public Comment Card indicating their name and the number of the agenda item on which they wish to speak, or that they intend to address the Board on matters not on the Agenda for the meeting.

Public Comment on Non-Agenda Matters, Pursuant to Government Code Section 54954.3 For the first round of public comment on non-agenda matters at the beginning of the agenda, ten persons selected by a drawing by the Clerk of the Boards from among the Public Comment Cards indicating they wish to speak on matters not on the agenda for the meeting will have three minutes each to address the Board on matters not on the agenda. For this first round of public comments on non-agenda matters, all Public Comment Cards must be submitted in person to the Clerk of the Boards at the location of the meeting and prior to commencement of the meeting. The remainder of the speakers wishing to address the Board on non-agenda matters will be heard at the end of the agenda, and each will be allowed three minutes to address the Board at that time.

Members of the Board may engage only in very brief dialogue regarding non-agenda matters, and may refer issues raised to District staff for handling. In addition, the Chairperson may refer issues raised to appropriate Board Committees to be placed on a future agenda for discussion.

Public Comment on Agenda Items After the initial public comment on non-agenda matters, the public may comment on each item on the agenda as the item is taken up. Public Comment Cards for items on the agenda must be submitted in person to the Clerk of the Boards at the location of the meeting and prior to the Board taking up the particular item. Where an item was moved from the Consent Calendar to an Action item, no speaker who has already spoken on that item will be entitled to speak to that item again.

Up to ten (10) speakers may speak for three minutes on each item on the Agenda. If there are more than ten persons interested in speaking on an item on the agenda, the Chairperson or other Board Member presiding at the meeting may limit the public comment for all speakers to fewer than three minutes per speaker, or make other rules to ensure that all speakers have an equal opportunity to be heard. Speakers are permitted to yield their time to one other speaker; however no one speaker shall have more than six minutes. The Chairperson or other Board Member presiding at the meeting may, with the consent of persons representing both sides of an issue, allocate a block of time (not to exceed six minutes) to each side to present their issue.

BOARD OF DIRECTORS REGULAR MEETING AGENDA

WEDNESDAY
MAY 1, 2013
9:45 A.M.

BOARD ROOM
7TH FLOOR

CALL TO ORDER

Opening Comments — Chairperson, Ash Kalra
Roll Call — Clerk of the Boards
Pledge of Allegiance

PUBLIC COMMENT ON NON-AGENDA MATTERS

Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3
For the first round of public comment on non-agenda matters at the beginning of the agenda, ten persons selected by a drawing by the Clerk of the Boards from among the Public Comment Cards indicating they wish to speak on matters not on the agenda for the meeting will have three minutes each to address the Board on matters not on the agenda. For this first round of public comments on non-agenda matters, all Public Comment Cards must be submitted in person to the Clerk of the Board at the location of the meeting and prior to commencement of the meeting.

COMMENDATIONS/PROCLAMATIONS/AWARDS

The Board of Directors will recognize outgoing Hearing Board Chair Tom Dailey, M.D., Hearing Board Vice Chair Christian Colline, P.E., and Hearing Board Alternate Member Janet Weiss, M.D., for their outstanding service and dedication to protecting air quality in the Bay Area.

CONSENT CALENDAR (ITEMS 1 –4)

Staff/Phone (415) 749-

1. Minutes of the Board of Directors Meeting of April 17, 2013

   Clerk of the Boards

2. Board Communications Received from April 17, 2013 through April 30, 2013

   J. Broadbent/5052
   jbroadbent@baaqmd.gov

   A list of communications directed to the Board of Directors received by the Air District from April 17, 2013 through April 30, 2013, if any, will be at each Board Member's place.

3. Adoption of Accountant I/II Job Classification — **J. Broadbent/5052**
   jbroadbent@baaqmd.gov

   The Board of Directors will consider approval of establishing a new job classification of Accountant I/II with an annual salary range starting at $60,199 at level I (Salary Range 123) and ending at $80,673 at level II (Salary Range 127).

4. Adoption of Amendments to the Air District's Administrative Code Division I: Operating Policies and Procedures for the Board of Directors – Section 5.4 Failure to Vote

J. Broadbent/5052
jbroadbent@baaqmd.gov

The Board of Directors will consider adoption of amendments to the Air District's Administrative Code, Division I: Operating Policies of the Board of Directors – Section 5.4: Failure to Vote.

COMMITTEE REPORTS AND RECOMMENDATIONS

5. Report of the **Budget and Finance Committee** Meeting of April 24, 2013

CHAIR: C. Groom **J. Broadbent/5052**
jbroadbent@baaqmd.gov

The Committee recommends Board of Directors' approval of the following item:

1) Adoption of the proposed Fiscal Year Ending (FYE) 2014 Budget following all required public hearings.

6. Report of the **Mobile Source Committee** Meeting of April 25, 2013

CHAIR: S. Haggerty **J. Broadbent/5052**
jbroadbent@baaqmd.gov

The Committee may recommend Board of Directors' approval of the following items(s):

A) Projects with Proposed Grant Awards over $100,000:

1. Approve Carl Moyer Program (CMP) projects with proposed grant awards over $100,000; and

2. Authorize the Executive Officer/Air Pollution Control Officer (APCO) to enter into agreements for the recommended CMP projects.

B) Fiscal Year Ending (FYE) 2014 Transportation Fund for Clean Air (TFCA) County Program Manager Expenditure Plans:

1. Approve the allocation of FYE 2014 TFCA County Program Manager Funds listed on Table 1; and

2. Authorize the Executive Officer/APCO to enter into funding agreements with the County Program Managers for the total funds to be programmed in FYE 2014, listed on Table 1.

C) Lower-Emission School Bus Program:

1. Allocate $13.21 million in Mobile Source Incentive Funding (MSIF) to the Lower-Emission School Bus Program (LESBP); and

2. Authorize the Executive Officer/APCO to enter into funding agreements with applicants meeting the requirements of the California Air Resources Board's
3. 2008 LESBP.

PUBLIC HEARING

7. Public Hearing to Consider Adoption of proposed Regulation 12, Rule 13: Foundry and Forging Operations; Regulation 6, Rule 4: Metal Recycling and Shredding Operations; Amendments to Regulation 2, Rule 1: Permits, General Requirements and approval of a California Environmental Quality Act (CEQA) Negative Declaration

J. Broadbent/5052
jbroadbent@baaqmd.gov

The Board of Directors will consider adoption of two new rules: Regulation 12, Rule 13: Foundry and Forging Operations; Regulation 6, Rule 4: Metal Recycling and Shredding Operations; amendments to Regulation 2, Rule 1: Permits, General Requirements and approval of a California Environmental Quality Act (CEQA) Negative Declaration.

PUBLIC COMMENT ON NON-AGENDA MATTERS

Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3
Speakers who did not have the opportunity to address the Board in the first round of comments on non-agenda matters will be allowed three minutes each to address the Board on non-agenda matters.

BOARD MEMBERS' COMMENTS

Any member of the Board, or its staff, on his or her own initiative or in response to questions posed by the public, may: ask a question for clarification, make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter or take action to direct staff to place a matter of business on a future agenda. (Gov't Code § 54954.2)

OTHER BUSINESS

8. Report of the Executive Officer/APCO

9. Chairperson's Report

10. Time and Place of Next Meeting is Wednesday, May 15, 2013, 939 Ellis Street, San Francisco, California 94109 at 9:45 a.m.

11. Adjournment

CONTACT THE CLERK OF THE BOARDS **(415) 749-5073**
939 ELLIS STREET SF, CA 94109 **FAX: (415) 928-8560**
BAAQMD homepage:
www.baaqmd.gov

- To submit written comments on an agenda item in advance of the meeting.
- To request, in advance of the meeting, to be placed on the list to testify on an agenda item.
- To request special accommodations for those persons with disabilities. Notification to the Executive Office should be given at least 3 working days prior to the date of the meeting so that arrangements can be made accordingly.

Any writing relating to an open session item on this Agenda that is distributed to all, or a majority of all, members of the body to which this Agenda relates shall be made available at the Air District's headquarters at 939 Ellis Street, San Francisco, CA 94109, at the time such writing is made available to all, or a majority of all, members of that body.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
939 ELLIS STREET, SAN FRANCISCO, CALIFORNIA 94109
FOR QUESTIONS PLEASE CALL (415) 749-4963

EXECUTIVE OFFICE:
MONTHLY CALENDAR OF DISTRICT MEETINGS

APRIL 2013

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Executive Committee *(Rescheduled from Monday April 15, 2013)* - **CANCELLED**	**Monday**	**29**	**9:30 a.m.**	**4th Floor Conf. Room**

MAY 2013

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Regular Meeting *(Meets on the 1st & 3rd Wednesday of each Month)*	**Wednesday**	**1**	**9:45 a.m.**	**Board Room**
Board of Directors Personnel Committee *(At the Call of the Chair)*	**Monday**	**6**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Legislative Committee *(At the Call of the Chair)*	**Monday**	**6**	**10:30 a.m.**	**4th Floor Conf. Room**
Advisory Council Regular Meeting *(Meets on the 2nd Wednesday of each Month)*	**Wednesday**	**8**	**9:00 a.m.**	**Board Room**
Board of Directors Climate Protection Committee *(At the Call of the Chair)*	**Thursday**	**9**	**10:00 a.m.**	**4th Floor Conf. Room And via videoconference at Santa Rosa Junior College Doyle Library, Room 4243 1501 Mendocino Avenue Santa Rosa, CA**
Special Board of Directors Meeting - Budget Hearing *(At the Call of the Chair)*	**Wednesday**	**15**	**9:45 a.m.**	**Board Room**
Board of Directors Regular Meeting *(Meets on the 1st & 3rd Wednesday of each Month)*	**Wednesday**	**15**	**9:45 a.m.**	**Board Room**
Board of Directors Executive Committee *(Meets on the 3rd Monday of each Month)*	**Monday**	**20**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Stationary Source Committee *(Meets on the 3rd Monday of each Month)*	**Monday**	**20**	**10:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Budget & Finance Committee *(Meets on the 4th Wednesday of each Month)* - **CANCELLED**	**Wednesday**	**22**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Mobile Source Committee *(Meets on the 4th Thursday of each Month)*	**Thursday**	**23**	**9:30 a.m.**	**Board Room**

JUNE 2013

TYPE OF MEETING	DAY	DATE	TIME	ROOM
Board of Directors Regular Meeting *(Meets on the 1st & 3rd Wednesday of each Month)*	**Wednesday**	**5**	**9:45 a.m.**	**Board Room**
Board of Directors Legislative Committee *(At the Call of the Chair)*	**Thursday**	**6**	**9:30 a.m.**	**4th Floor Conf. Room**
Advisory Council Regular Meeting *(Meets on the 2nd Wednesday of each Month)*	**Wednesday**	**12**	**9:00 a.m.**	**Board Room**
Board of Directors Executive Committee *(Meets on the 3rd Monday of each Month)*	**Monday**	**17**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Stationary Source Committee *(Meets on the 3rd Monday of each Month)*	**Monday**	**17**	**10:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Regular Meeting *(Meets on the 1st & 3rd Wednesday of each Month)*	**Wednesday**	**19**	**9:45 a.m.**	**Board Room**
Board of Directors Budget & Finance Committee *(Meets on the 4th Wednesday of each Month)*	**Wednesday**	**26**	**9:30 a.m.**	**4th Floor Conf. Room**
Board of Directors Mobile Source Committee *(Meets on the 4th Thursday of each Month)*	**Thursday**	**27**	**9:30 a.m.**	**Board Room**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Ash Kalra and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/Air Pollution Control Officer

Date: April 22, 2013

Re: Minutes of the Board of Directors Regular Meeting of April 17, 2013

RECOMMENDED ACTION

Approve the attached draft minutes of the Board of Directors Regular Meeting of April 17, 2013.

DISCUSSION

Attached for your review and approval are the draft minutes of the Board of Directors Regular Meeting of April 17, 2013.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Sean Gallagher
Reviewed by: Ana Sandoval

Attachment

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
(415) 749-5073

Board of Directors Regular Meeting
Wednesday, April 17, 2013

DRAFT MINUTES

CALL TO ORDER

Chairperson Ash Kalra called the meeting to order at 9:50 a.m.

ROLL CALL

Present: Chairperson Ash Kalra; Secretary Carole Groom; and Directors Susan Adams, John Avalos, Teresa Barrett, Tom Bates, John Gioia, David Hudson, Carol Klatt, Liz Kniss, Eric Mar, Jan Pepper, Mary Piepho, Mark Ross, Tim Sbranti, Brad Wagenknecht and Shirlee Zane.

Absent: Vice-Chairperson Nate Miley; and Directors Scott Haggerty, Edwin Lee, Jim Spering and Ken Yeager.

PLEDGE OF ALLEGIANCE

Chairperson Kalra led the Pledge of Allegiance.

OPENING COMMENTS: None.

PUBLIC COMMENT ON NON-AGENDA MATTERS: None.

NOTED PRESENT: Director Piepho was noted present at 9:52 a.m.

CONSENT CALENDAR (ITEMS 1 – 7)

1. **Minutes of the Board of Directors Regular Meeting of March 20, 2013;**
2. **Board Communications Received from March 20, 2013, through April 16, 2013;**
3. **Air District Personnel on Out-of-State Business Travel;**
4. **Notice of Violations Issued and Settlements in Excess of $10,000 in March 2013;**
5. **Approval of Board Members to Attend the Air & Waste Management Association 106th Annual Conference & Exhibition; and**
6. **Set a Public Hearing for May 1, 2013, to Consider Adoption of Proposed Regulation 12, Rule 13: Foundry and Forging Operations; Regulation 6, Rule 4: Metal Recycling and Shredding Operations; Amendments to Regulation 2, Rule 1: Permits, General Requirements and Approval of a California Environmental Quality Act (CEQA) Negative Declaration; and**

7. Notice of Proposed Amendments to the Air District's Administrative Code Division I: Operating Policies and Procedures for the Board of Directors – Section 5.4 Failure to Vote.

Board Comments:

Agenda Item #7, Notice of Proposed Amendments to the Air District's Administrative Code Division I: Operating Policies and Procedures for the Board of Directors – Section 5.4 Failure to Vote, was removed from the consent calendar for consideration.

Public Comments: None.

Board Action: Director Wagenknecht made a motion to approve Consent Calendar Items 1, 2, 3, 4, 5 and 6; Director Klatt seconded; and the motion carried unanimously.

7. Notice of Proposed Amendments to the Air District's Administrative Code Division I: Operating Policies and Procedures for the Board of Directors – Section 5.4 Failure to Vote.

Brian Bunger, District Counsel, delivered the staff report Notice of Proposed Amendments to the Air District's Administrative Code Division I: Operating Policies and Procedures of the Board of Directors – Section 5.4 Failure to Vote.

Board Comments:

Chairperson Kalra suggested the sentence, "It shall be the duty of the Directors to vote when present," or a version thereof, be retained in the final version of the revised Administrative Code. Director Hudson agreed.

Director Piepho asked about the effect of a vote for abstention on one's right to request reconsideration and whether that effect should be explicitly stated, which questions were answered by Mr. Bunger.

The Board directed staff to agendize the item for discussion at Executive Committee and to proceed with the proposed Administrative Code change regarding elimination of the failure to vote provision.

Public Comments: None.

Board Action: Director Hudson made a motion to move forward staff's recommendation regarding Notice of Proposed Amendments to the Air District's Administrative Code Division I: Operating Policies and Procedures for the Board of Directors – Section 5.4 Failure to Vote, as amended with direction to staff to draft a provision that explicitly states the duty of the Directors to vote when present and the effect of an abstention vote on one's right to request reconsideration; Director Piepho seconded; and the motion carried unanimously.

NOTED PRESENT: Director Kniss was noted present at 9:59 a.m.

COMMITTEE REPORTS AND RECOMMENDATIONS

8. Report of the Public Outreach Committee Meeting of March 21, 2013
Committee Chairperson Ross

The Public Outreach Committee met on Thursday, March 21, 2013, and approved the minutes of October 31, 2012.

The Public Outreach Committee received and considered the staff presentation Contract for Website Maintenance & Routine Upgrades and recommends the Board authorize the Executive Officer/Air Pollution Control Officer (APCO) to execute a one-year contract with Cylogy, Inc., not to exceed $110,000 for website maintenance and routine upgrades.

The Public Outreach Committee received the staff presentation Public Participation Plan Update, including the key elements, regional workshops schedule, supplemental outreach efforts and next steps. Public Outreach Committee members noted that the Public Participation Plan should include a simple guide to engaging with the Air District for easy reference.

The Public Outreach Committee received the staff presentation 2013 Spare the Air Campaign, including overviews of creative concepts, social media utilization, media relations, the Bay Area Commuter Benefits Program and next steps.

The Public Outreach Committee received and considered the staff presentation Funding Approval for Spare the Air Campaigns and recommends the Board authorize the Executive Officer/APCO to execute a contract amendment for year two of the contract with O'Rorke, Inc., in the amount of $1,990,000 for Advertising, Communications & Evaluation Services for the Spare the Air Campaign.

The next meeting of the Public Outreach Committee is at the call of the Chair.

NOTED PRESENT: Director Zane was noted present at 10:03 a.m.

Board Comments: None.

Public Comments: None.

Board Action:

Director Ross made a motion to approve the report and recommendations of the Public Outreach Committee; Director Wagenknecht seconded; and the motion carried unanimously.

9. Report of the Budget and Finance Committee Meeting of March 27, 2013
Committee Chairperson Groom

The Budget and Finance Committee met on Wednesday, March 27, 2013, and approved the minutes of February 27, 2013.

The Budget and Finance Committee received the staff presentation on the Draft Amendments to Regulation 3, Fees, including an overview of revenue sources in the Fiscal Year End (FYE) 2013

Budget, an explanation of the background and current cost recovery policy, proposed changes to fee schedules, impact on small businesses, proposed online customer interface, incident response and open burning fees, public comments and the rule development schedule. The Budget and Finance Committee directed staff to develop alternate fee proposals for further Committee consideration and discussion.

The Budget and Finance Committee received and discussed the staff presentation on the Proposed FYE 2014 Budget. The Budget and Finance Committee reviewed the status of the current FYE 2013, an overview of the revenue and expenditure forecast for FYE 2014, a summary of personnel costs and vacancy distribution, a review of strategic staffing principles and implementation, and trending in Air District reserve funds. The proposed budget is a balanced budget without the use of reserves, and includes the filling of twelve vacant staff positions and an increase in the Other Post-Employment Benefits contribution to $2.5 million.

The Budget and Finance Committee received the presentation on the Disposition Strategy/Marketing Plan for 939 Ellis Street, by real estate broker Cassidy Turley, including a market and site overview and a summary of the marketing plan and schedule.

The next meeting of the Budget and Finance Committee is Wednesday, April 24, 2013, at 9:30 a.m.

Public Comments: None.

Board Comments: None.

Board Action:

Director Groom made a motion to approve the report of the Budget and Finance Committee; Director Adams seconded; and the motion carried unanimously.

10. Report of the Mobile Source Committee Meeting of March 28, 2013
Committee Chairperson Haggerty (as delivered by Committee Vice-Chairperson Piepho)

The Mobile Source Committee met on Thursday, March 28, 2013, and upon establishing a quorum, approved the minutes of February 21, 2013.

The Mobile Source Committee received an update on the Regional Bicycle Share Pilot Project, including overview, central concepts of bicycle sharing, bicycle and station specifications, pilot project background, goals and objectives, milestones and timeline, bike share agreement, safety measures, estimated costs and next steps.

The Mobile Source Committee then reviewed projects with proposed grant awards over $100,000 and recommends Board approval of four projects for the replacement of off-road diesel powered loaders, two in Sonoma County and one each in Marin and Napa counties.

The Mobile Source Committee also reviewed the Participation in California Goods Movement Bond Program (I-Bond) Year 4 and recommends the Board:

1. Adopt a resolution in support of the Air District's application for I-Bond funding;

2. Authorize the Executive Officer/APCO to enter into agreements with the California Air Resources Board (ARB) related to the acceptance of I-Bond funding; and

3. Authorize the Executive Officer/APCO to enter into agreements with eligible applicants for projects ranked and approved by the ARB.

The next meeting of the Mobile Source Committee is on Thursday, April 25, 2013, at 9:30 a.m.

Board Comments: None.

Public Comments: None.

Board Action:

Director Piepho made a motion to approve the report and recommendations of the Mobile Source Committee; Director Hudson seconded; and the motion carried unanimously.

PRESENTATIONS

11. Sustainable Community Strategy Update

Jean Roggenkamp, Deputy APCO, introduced the topic, Henry Hilken, Director of Planning, Rules and Research, Miriam Chion, Planning and Research Director, Association of Bay Area Governments (ABAG), and Ken Kirkey, Director of Planning, Metropolitan Transportation Commission (MTC).

Mr. Hilken gave the staff presentation Sustainable Communities Strategy Update, including a summary of Senate Bill (SB) 375 and Plan Bay Area (Plan), review of engagement by the Air District and next steps.

NOTED PRESENT: Director Sbranti was noted present at 10:11 a.m.

Director Adams asked about the impact of proposed changes to the California Environmental Quality Act and its application, which questions were answered by Mr. Hilken.

Ms. Chion gave the initial presentation Draft Plan Bay Area Presentation through slide 16, Regional Growth Strategy Focused Growth, including regional targets, plan development process, growth trends and growth strategy.

Mr. Kirkey gave the remainder of the presentation, including investments, plan goals and remaining milestones.

Board Comments:

Director Kniss asked about the penalties for cities that do not meet the targets, which questions were answered by Ms. Chion.

Director Kniss and Mr. Kirkey discussed the merits of a 40-year prediction model.

Director Kniss and Ms. Chion discussed the challenges of adding housing in the designated areas.

Director Gioia suggested the next round of Sustainable Communities Strategy meetings include ABAG, MTC, Air District and the San Francisco Bay Conservation and Development Commission.

Director Ross asked if increases in casual carpooling and telecommuting count towards the achievement of targets under the Plan, which question was answered by Mr. Kirkey.

Director Hudson encouraged all those involved not to lose sight of the mandated targets.

Director Adams said the size of the document proves prohibitive to most public involvement, predictions ignore developing transportation technology, and projections continue to assume a largely unaffected gas tax revenue for road maintenance when vehicles will no longer rely on gasoline as they have in the past. Mr. Kirkey and Director Adams discussed the same, the seeming conundrum of increased urban infill and improved air quality, and plan timelines.

Director Bates said the Plan does not prevent or circumvent local planning and asked if there are any instructive lawsuits on the topic, which question was answered by Mr. Kirkey. Director Bates noted that 40 years is a long time, demographics will change drastically during that time and the City of Berkeley is working on enabling property owners to build small residential cottages behind existing residences as a matter of right.

Director Sbranti said there is concern about local control of planning processes and asked how transportation resources will be affected for those communities that are unable to meet the established goals, which questions were answered by Mr. Kirkey. Director Sbranti asked how contributions by the counties around the circumference of the Bay Area were taken into account during the development of the Plan, which questions were answered by Ms. Chion. Director Sbranti said it is important to look at ways to encourage jobs creation in the surrounding counties as well.

Director Hudson asked what portion of the state-wide reductions the Bay Area is responsible for, which question was answered by Ms. Roggenkamp.

Public Comments: None.

Board Action: None; informational only.

12. Status Report on 939 Ellis Street Disposition

Jeffrey McKay, Deputy APCO, gave the staff presentation Status Report on 939 Ellis Street Disposition, including a summary of the presentation by broker Cassidy Turley and considerations involved.

Mr. McKay introduced Ric Russell, Managing Partner, Cassidy Turley Northern California, who made introductory comments and Tom Christian, Partner, who gave the presentation Disposition Strategy/Marketing Plan for 939 Ellis Street, including a market and site overview and a summary of the marketing plan and schedule.

Board Comments:

Chairperson Kalra asked about the likely fate of the building after sale, which questions were answered by Messrs. Christian and Russell.

Director Adams asked about the structure of the broker payment, the nature of the sales budget and for information on fire funds, which questions were answered by Messrs. Christian, Russell and McKay.

Public Comments: None.

Board Action: None; informational only.

CLOSED SESSION

The Board adjourned to Closed Session at 11:42 a.m.

13. EXISTING LITIGATION (Government Code Section 54956.9(a))

Pursuant to Government Code Section 54956.9(a), a need existed for the Board to meet in closed session with legal counsel to consider the following case:

> California Building Industry Association v. Bay Area AQMD, Alameda County Superior Court, Case No. RG-10548693; California Court of Appeal, First Appellate District, Case No. A135335.

OPEN SESSION

The Board resumed Open Session at 11:46 a.m. with no action reported.

PUBLIC COMMENT ON NON-AGENDA MATTERS: None.

BOARD MEMBERS' COMMENTS: None.

OTHER BUSINESS

14. Report of the Executive Officer/APCO:

Mr. McKay announced the end of the wood smoke season and that the Spare the Air season will kick off in May, that a round of workshops will begin next week regarding the refinery emissions tracking rule and that the first public hearings, both on the proposed budget and the adoption of proposed regulations, are set for May 15, 2013. Director Adams asked if fees for burning will be included, which question was answered by Mr. McKay.

15. Chairperson's Report:

Chairperson Kalra announced the launch of videoconferencing capability, beginning with the Budget and Finance Committee meeting on April 24, 2013. The Board discussed the plan for and pace of adding additional remote sites as well as future committee meetings with videoconferencing capability.

16. Time and Place of Next Meeting: Wednesday, May 1, 2013, Bay Area Air Quality Management District Office, 939 Ellis Street, San Francisco, California 94109 at 9:45 a.m.

17. Adjournment: The Board meeting adjourned at 11:50 a.m.

Sean Gallagher
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Ash Kalra and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/Air Pollution Control Officer

Date: April 18, 2013

Re: Board Communications Received from April 17, 2013 through April 30, 2013

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

A list of communications directed to the Board of Directors received by the Air District from April 17, 2013 through April 30, 2013, if any, will be at each Board Member's place at the May 1, 2013 Board meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Vanessa Johnson
Reviewed by: Ana Sandoval

AGENDA: 3

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Ash Kalra and Members of the Board of Directors

From: Jack Broadbent
Executive Officer/APCO

Date: March 19, 2013

Re: Consider Establishing the New Classification of Accountant I/II

RECOMMENDED ACTION:

Approve establishing a new job classification of Accountant I/II with an annual salary range starting at $60,199 at level I (Salary Range 123) and ending at $80,673 at level II (Salary Range 127).

BACKGROUND

Currently, the Accountant classification is a single-level classification. Staff recommends establishing a two-level, alternatively staffed classification of Accountant I/II. The Board of Directors' approval of this new classification and the attached draft job description is needed in order for the classification to be added to the classification system.

DISCUSSION

The Accountant I/II will increase flexibility in hiring and staffing. The current single-level structure requires the Air District to hire at the journey level rather than the entry level, and therefore limits opportunities for both staff and external candidates. Additionally, a two-level structure is consistent with the practice of local and regional governmental agencies. The two-level structure would provide an opportunity to a broader range of applicants, and an opportunity for advancement for incumbents.

The current salary for the Accountant (Salary Range 123) starts at $60,199 and ends at $73,173. It is recommended that the salary for the entry level Accountant I be set at the current starting salary and that the salary for the journey level Accountant II be set at 10% above the current top salary of the Accountant.

The Accountant I/II will be a represented position which will have knowledge of governmental accounting procedures and perform varied, complex accounting duties.

BUDGET CONSIDERATION/FINANCIAL IMPACT:

There is no financial impact beyond that already contemplated in the FY 2012-13 budget. This recommendation will not increase FTEs.

Respectfully Submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Rex Sanders
Reviewed by: Jack M. Colbourn

Attachment

ACCOUNTANT I/II

DEFINITION

Under direction, performs professional accounting work relating to District accounting procedures and records; provides technical direction to accounting support staff; performs related work as assigned.

DISTINGUISHING CHARACTERISTICS

Accountant I is the entry level class in this series. Initially under close supervision, incumbents perform a variety of routine accounting duties while learning the District accounting policies and procedures. With experience, the work becomes more diversified, complex and requires increasing independent judgment, This class is alternatively staffed with the Accountant II level and incumbents may progress to the higher level after gaining experience and demonstrating proficiency sufficient to meet the qualifications of the higher level class.

Accountant II is the journey level class in this series. The incumbent is fully competent to perform the full scope and diversity of responsibilities. Successful performance requires a thorough knowledge of governmental accounting procedures, the ability to exercise sound independent judgment within established guidelines and skill in directing accounting activities. Accountant II level requires knowledge of GASB standards, existing financial and accounting procedures and precedents as well as the initiative to identify and resolve related issues. This class is distinguished from Principal Accountant in that the latter performs the more complex accounting duties and provides lead direction to accounting staff.

EXAMPLES OF DUTIES (Illustrative Only)

Reviews accounting and financial documents to ensure accuracy of information and calculations and makes correcting entries into the computerized financial system.

Examines supporting documentation to establish proper authorization and conformance with agreements, contracts, and state and federal regulations.

Maintains control and subsidiary accounting records involving a variety of transactions and accounts.

Prepares trial balances; upon completion of accounting cycles, coordinates and calculates periodic closings.

Prepares journal entries and reconciliations of general ledger, subsidiary accounts and bank statements.

Assists in the preparation of and analyzes and adjusts budgets for departmental and District funds.

Confers with departmental representatives and provides information regarding access to the budgeting and accounting processes inherent in the computerized operating system.

Coordinates accounting and internal control activities.

Provides information to outside agencies as requested.

Analyzes programs and legislation to determine fiscal and budgetary impact; prepares budgetary appropriation transfers and supplemental budgets.

Reviews and recommends modifications to accounting systems and procedures.

Provides technical support to outside auditors and governmental program auditors.

Recommends policy changes and creates procedures in accordance to the Governmental Accounting Standards Board (GASB) and applicable District, state, and federal laws, rules and regulations.

Implements an indirect cost program.

Maintains Fixed Assets Records of the District.

QUALIFICATIONS

Knowledge of:

Principles, practices and terminology of general, fund and governmental accounting.

Principles and practices of business data processing, particularly as related to the processing of accounting information.

Applicable laws regulating public financial operations.

Budgeting principles and terminology.

Basic auditing and reconciliation principles and methods.

Skill in:

Analyzing, balancing, reviewing, interpreting and reconciling financial reports and transactions.

Verifying the accuracy of financial data and information.

Ensuring proper authorization and documentation for disbursements and other transactions.

Preparing clear, concise and complete financial reports and statements.

Exercising sound independent judgment within established procedural guidelines.

Making accurate mathematic and statistical calculations.

Maintaining accurate records and files.

Establishing and maintaining effective working relations with those contacted in the course of work.

Ability to:

Interpret and explain accounting and financial agreements, contracts, and state and federal regulations.

Create and maintain accurate records for a complex accounting structure using a computerized financial system .

Prepare a variety of reports and financial documents, coordinating information from a variety of sources. Analyze accounting practices and policies and recommend changes in accordance with GASB and applicable District, state, and federal laws, rules and regulations.

Other Requirements:

Some positions require the strength to lift and carry files weighing up to 15 pounds; stand for periods of time copying or assembling materials; bend, reach and kneel to retrieve and return files; work at a computer for two hours or more; walk up stairs; use various office and telecommunication equipment; use a mouse and type on a keyboard; read small print on a computer screen or in printed documents.

Education and Experience:

A typical way to obtain the knowledge and skills is:

Accountant I: Equivalent to graduation from a four year college or university with major coursework in accounting, finance, business or public administration, economics or a closely related field and two years of professional level accounting experience in a professional accounting department. Governmental or public agency accounting experience is desirable. Sub-professional accounting support work may be substituted for the education on a year for year basis to a maximum of two years.

Accountant II: In addition to the above, two years of professional level accounting experience

FLSA Non-Exempt

(Rev. 2/13)

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Ash Kalra and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 24, 2013

Re: Proposed Amendments to the Air District's Administrative Code Division I: Operating Policies and Procedures for the Board of Directors - Section 5.4 Failure to Vote

RECOMMENDED ACTION

Approve proposed amendments to the Air District's Administrative Code Division I: Operating Policies and Procedures of the Board of Directors - Section 5.4 Failure to Vote.

BACKGROUND

Administrative Code Section 14.1, Amendments Mechanism, requires the noticing of proposed amendments at a preceding regular meeting of the Board of Directors before adoption can take place. The proposed changes were noticed at the Regular Board meeting of April 17, 2013.

DISCUSSION

During a Legislative Committee meeting of March 14, 2013, there was a discussion on the Administrative Code Operating Policies and Procedures for the Board of Directors regarding Failure to Vote. The provision currently states that if a Director remains silent on a voice vote or on a roll call, the Director shall be deemed to have voted with the prevailing side.

Staff was directed to develop an amendment to this provision to remove the above rule. Upon further review of Administrative Code Section 5.4, staff determined that it is inconsistent with Robert's Rules of Order, which the Board has expressed its desire to follow in conducting its meetings (see Administrative Code Section 4.1). In addition, the reference in Section 5.4 to a Board Member's "interest" in a matter is vague and potentially duplicative of Section 5.3.

Accordingly, staff has developed the requested amendment to the Administrative Code that would delete this provision in its entirety. Under Robert's Rules of Order, the effect of the proposed amended language (attached) is that if a Director remains silent, or abstains from voting, on a voice vote or on a roll call vote, the Director's abstention will not be counted with either side.

The proposed amendments to the Administrative Code are attached for your review and consideration.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Rex Sanders
Reviewed by: Brian C. Bunger

Attachments:
1) Administrative Code Section 5 – Red-line version
2) Administrative Code Section 5 – Final version

SECTION 5 BOARD OF DIRECTORS, VOTING

5.1 VOICE VOTE.

The usual method of taking a vote is by voice; provided, however, that the Chairperson may, and when requested to do so by two (2) Directors, shall, take a vote by roll call.

5.2 ROLL CALL.

All ordinances, rules, regulations or amendments thereto and any matters involving the disbursement of money shall be adopted by roll call, except where a voice vote is declared by the Chairperson to be unanimous, and shall require the affirmative vote of the majority of the members of the Board. In addition, all proposals to settle any pending litigation in which the District is a defendant in a judicial action, whether approved in open session or in closed session, shall require the affirmative vote of the majority of the members of the Board.

5.3 CONFLICT OF INTEREST.

When one or more members determines that participation by the member(s) is prohibited by Section 87100 of the Government Code, because of the member(s') financial interest, the total membership of the Board shall be deemed to be reduced by the number of members prohibited from participation for the purpose of determining the number of affirmative votes required pursuant to Section I-5.2.

~~5.4 FAILURE TO VOTE.~~

~~If a Director shall remain silent on a voice vote or on a roll call, the Director shall be deemed to have voted with the prevailing side. It shall be the duty of the Directors to vote when present. A Director who has an interest in the matter being voted upon shall announce the fact that the Director has an interest and request permission from the Chairperson to be excused from voting. In such case, the failure to vote shall not be deemed a vote on either side.~~

SECTION 5 BOARD OF DIRECTORS, VOTING

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Ash Kalra and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/Air Pollution Control Officer

Date: April 24, 2013

Re: Report of the Budget and Finance Committee Meeting of April 24, 2013

RECOMMENDED ACTION

The Budget and Finance Committee recommends Board of Directors' approval of the following items:

A) None. Informational item, receive and file.

B) Adoption of the proposed Fiscal Year Ending (FYE) 2014 Budget following all required public hearings.

C) None. Informational item, receive and file.

BACKGROUND

The Committee met on Thursday, April 24, 2013. The Committee received and considered the following reports:

A) Summary of Draft Fee Amendments for FYE 2014;

B) Continued Discussion of FYE 2014 Proposed Air District Budget and Consideration to Recommend Adoption; and

C) Third Quarter Financial Report – FYE 2013.

Attached are the staff reports that were presented in the Committee packet.

Chairperson Carole Groom will give an oral report of the meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

A) The draft fee amendments increase fee revenue in FYE 2014 by approximately $2 million from revenue that would otherwise result without a fee increase. Fee revenue estimates are included in the draft FYE 2014 budget.

B) The proposed consolidated budget for FYE 2014 is $134.3 million and is a balanced budget.

C) None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Sean Gallagher
Reviewed by: Ana Sandoval

Attachments

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Carole Groom and Members of the Budget and Finance Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 9, 2013

Re: Summary of Draft Fee Amendments for Fiscal Year Ending (FYE) 2014

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

On March 27, 2013, staff provided the Budget & Finance Committee with a summary of the proposed fee amendments for FYE 2014.

DISCUSSION

Staff will address issues raised by the Committee regarding the Air District's proposed Incident Response, Open Burning, and Online Customer Interface Fees.

BUDGET CONSIDERATION/FINANCIAL IMPACT

The draft fee amendments increase fee revenue in FYE 2014 by approximately $2 million from revenue that would otherwise result without a fee increase. Fee revenue estimates are included in the draft FYE 2014 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Jim Karas
Reveiwed by: Jeffrey McKay

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Carole Groom and Members
of the Budget and Finance Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 2, 2013

Re: Continued Discussion of Fiscal Year Ending (FYE) 2014 Proposed Air District Budget and Consideration to Recommend Adoption

RECOMMENDED ACTION

The Committee will continue discussion of the proposed budget for FYE 2014 and consider recommending Board of Directors adoption of the proposed FYE 2014 Budget.

BACKGROUND

At the March 20, 2013 regular Board of Directors meeting, the FYE 2014 Proposed Budget document was referred to the Budget and Finance Committee for review at the Committee's March 27, 2013 meeting.

DISCUSSION:

Staff presented the proposed budget for FYE 2014 at the March 27, 2013 Budget and Finance Committee meeting. The proposed budget is balanced, with the General Fund totaling $63.6 million and the Consolidated Funds (including program distributions) totaling $134.3 million. Proposed capital requests are $4.9 million.

Prior to April 5, 2013, staff published a notice in newspapers read by the general public. These notices state that the first of two public hearings on the budget will be conducted on May 15, 2013 and that the second hearing will be conducted on June 19, 2013.

BUDGET CONSIDERATION/FINANCIAL IMPACT

The proposed consolidated budget for FYE 2014 is $134.3 million and is a balanced budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: David Glasser
Reviewed by: Jack M. Colbourn

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Carole Groom and Members of the Budget and Finance Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 9, 2013

Re: Third Quarter Financial Report – Fiscal Year Ending (FYE) 2013

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

Finance staff will present an update on the Air District's financial results for the third quarter of FYE 2013. The following information summarizes those results.

GENERAL FUND BUDGET: STATEMENT OF REVENUE

Comparison of Budget to Actual Revenue

- County receipts $12,791,776 (61%) of budgeted revenue.
- Permit Fee receipts $22,187,899 (92%) of budgeted revenue.
- Title V Permit Fees $3,268,056 (88%) of budgeted revenue.
- Asbestos Fees $1,795,094 (99%) of budgeted revenue.
- Toxic Inventory Fees $548,661 (78%) of budgeted revenue.
- Penalties and Settlements $1,054,980 (62%) of budgeted revenue.
- Miscellaneous Revenue $56,665 (39%) of budgeted revenue.
- Interest Revenue $138,951 (68%) of budgeted revenue.

GENERAL FUND BUDGET: STATEMENT OF EXPENDITURES

Comparison of Budget to Actual Expenditures

- Personnel – Salaries $21,302,098 (68%) of budgeted expenditures.
- Personnel - Fringe Benefits $10,449,558 (74%) of budgeted expenditures.
- Operational Services and Supplies $9,336,605 (52%) of budgeted expenditures.
- Capital Outlay $1,314,074 (67%) of budgeted expenditures.

Cash and Investments in County Treasury:

(Based on the March 2013 Account Balance)

General Fund	$19,679,916
TFCA	$66,209,324
MSIF	$40,832,445
Carl Moyer	$4,919,318
CA Goods Movement	$18,477,157
	$150,118,160

Investments Held as:

(Based on the March 2013
- Account Balance)

Fixed Income Investments	55% of total investment pool
Short Term Investments	45% of total investment pool

FUND BALANCES

	6/30/2011 Audited	6/30/2012 Unaudited	6/30/2013 Projected
Imprest Cash	$ -	-	-
Building and Facilities	4,075,756	4,075,756	3,711,210
PERS Funding	1,500,000	1,500,000	1,365,836
Radio Replacement	75,000	75,000	68,292
Capital Equipment	1,219,818	1,219,818	1,110,714
Post-Employment Benefits	2,000,000	2,000,000	1,821,116
Worker's Compensation	1,000,000	1,000,000	910,557
Economic Uncertainties	130,660	130,660	118,973
TOTAL SPECIAL RESERVES	$ 10,001,234	$ 10,001,234	$ 9,106,698
UNDESIGNATED	9,528	3,441,554	4,358,208
TOTAL FUND BALANCES	$ 10,010,762	$ 13,442,788	$13,464,906

VENDOR PAYMENTS

In accordance with provisions of the Administrative Code, Division II Fiscal Policies and Procedures - Section 4 Purchasing Procedures: 4.3 Contract Limitations, staff is required to provide the Board a listing of all of the vendors receiving payments in excess of $70,000 under contracts that have not been previously reviewed by the Board. Prior Air District practice does not bring payments for recurring routine business costs such as utilities, licenses, office supplies and the like, before the Board, except as part of the Air District budget. The current practice now is to list such payments over $70,000 in a quarterly financial report. The purpose is to increase the information flow to the Board, to maintain committee efficiency, and to clarify policy.

As a related practice, staff will report on vendors that undertook work for the Air District on several projects that individually were less than $70,000, but cumulatively now total in excess of $70,000.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: David Glasser
Reviewed by: Jack M. Colbourn

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Ash Kalra and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/Air Pollution Control Officer

Date: April 25, 2013

Re: Report of the Mobile Source Committee Meeting of April 25, 2013

RECOMMENDED ACTION

The Mobile Source Committee recommends Board of Directors' approval of the following items:

A) Projects with Proposed Grant Awards over $100,000:

1. Approve Carl Moyer Program (CMP) projects with proposed grant awards over $100,000; and

2. Authorize the Executive Officer/Air Pollution Control Officer (APCO) to enter into agreements for the recommended CMP projects.

B) Fiscal Year Ending (FYE) 2014 Transportation Fund for Clean Air (TFCA) County Program Manager Expenditure Plans:

1. Approve the allocation of FYE 2014 TFCA County Program Manager Funds listed on Table 1; and

2. Authorize the Executive Officer/APCO to enter into funding agreements with the County Program Managers for the total funds to be programmed in FYE 2014, listed on Table 1.

C) Lower-Emission School Bus Program:

1. Allocate $13.21 million in Mobile Source Incentive Funding (MSIF) to the Lower-Emission School Bus Program (LESBP); and

2. Authorize the Executive Officer/APCO to enter into funding agreements with applicants meeting the requirements of the California Air Resources Board's 2008 LESBP.

BACKGROUND

The Committee met on Thursday, April 25, 2013. The Committee received the following reports and recommendations:

A) Projects with Proposed Grant Awards over $100,000;

B) FYE 2014 TFCA County Program Manager Expenditure Plans; and

C) Lower-Emission School Bus Program.

Attached are the staff reports that were presented in the Committee packet.

Chairperson Scott Haggerty will provide an oral report of the Committee meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

A) None. Through the CMP, MSIF and TFCA, the Air District distributes "pass-through" funds to public agencies and private entities on a reimbursement basis. Administrative costs for both programs are provided by each funding source.

B) None. TFCA County Program Manager revenues are generated from a dedicated outside funding source and are passed through to County Program Managers.

C) None. Through the MSIF the Air District distributes "pass-through" funds to grantees on a reimbursement basis. Administrative costs for this program are provided by the funding source.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Sean Gallagher
Reviewed by: Ana Sandoval

Attachments

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Scott Haggerty and Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 9, 2013

Re: Projects with Proposed Grant Awards over $100,000

RECOMMENDATIONS

Recommend the Board of Directors:

1. Approve Carl Moyer Program projects with proposed grant awards over $100,000.

2. Authorize the Executive Officer/APCO to enter into agreements for the recommended Carl Moyer Program projects.

BACKGROUND

The Bay Area Air Quality Management District (Air District) has participated in the Carl Moyer Program (CMP), in cooperation with the California Air Resources Board (ARB), since the program began in fiscal year 1998-1999. The CMP provides grants to public and private entities to reduce emissions of oxides of nitrogen (NOx), reactive organic gases (ROG) and particulate matter (PM) from existing heavy-duty engines by either replacing or retrofitting them. Eligible heavy-duty diesel engine applications include on-road trucks and buses, off-road equipment, marine vessels, locomotives, stationary agricultural pump engines and forklifts.

Assembly Bill 923 (AB 923 - Firebaugh), enacted in 2004 (codified as Health and Safety Code Section 44225), authorized local air districts to increase their motor vehicle registration surcharge up to an additional $2 per vehicle. The revenues from the additional $2 surcharge are deposited in the Air District's Mobile Source Incentive Fund (MSIF). AB 923 stipulates that air districts may use the revenues generated by the additional $2 surcharge for projects eligible for grants under the CMP.

Since 1991, the Transportation Fund for Clean Air (TFCA) program has funded projects that achieve surplus emission reductions from on-road motor vehicles. Funding for this program is provided by a $4 surcharge on motor vehicles registered within the San Francisco Bay Area as authorized by the California State Legislature. The statutory authority for the TFCA and requirements of the program are set forth in California Health and Safety Code Sections 44241 and 44242. Sixty percent (60%) of TFCA funds are awarded directly by the Air District through a grant program known as the Regional Fund that is allocated on a competitive basis to eligible projects proposed by project sponsors.

On March 7, 2012, the Board of Directors authorized Air District participation in Year 14 of the CMP, and authorized the Executive Officer/APCO to execute Grant Agreements and amendments for projects funded with CMP funds or MSIF revenues, with individual grant award amounts up to $100,000. On November 18, 2009, the Air District Board of Directors authorized the Executive Officer/APCO to execute Grant Agreements and amendments for projects funded with TFCA funds, with individual grant award amounts up to $100,000.

CMP and TFCA Regional Fund projects with grant award amounts over $100,000 are brought to the Committee for consideration at least on a quarterly basis. Staff reviews and evaluates the grant applications based upon the respective governing policies and guidelines established by the ARB and/or the Air District's Board of Directors.

DISCUSSION

Carl Moyer Program:

The Air District started accepting applications for CMP Year 14 projects on July 23, 2012. The Air District has approximately $15 million available for CMP projects from a combination of MSIF and CMP funds. Project applications are being accepted and evaluated on a first-come, first-served basis.

As of April 9, 2013, the Air District had received 35 project applications. Of the applications that have been evaluated between March 13, 2013 and April 9, 2013, two (2) eligible projects have proposed individual grant awards over $100,000. These projects will replace one (1) diesel-powered off-road loader and one (1) diesel-powered agricultural tractor with newer, low-polluting equipment. These projects will reduce over 3.5 tons of NOx, ROG and PM per year. Staff recommends allocating $360,489 to these projects from a combination of CMP funds and MSIF revenues. Attachment 1 to this staff report provides additional information on these projects.

Attachment 2 lists all of the eligible projects that have been received by the Air District as of April 9, 2013, and summarizes the allocation of funding by equipment category (Figure 1), and county (Figure 2). This list also includes the Voucher Incentive Program (VIP) on-road replacement projects awarded since the last committee update. Approximately 40% of the funds have been awarded to projects that reduce emissions in highly impacted Bay Area communities.

TFCA:

No TFCA applications requesting individual grant awards over $100,000 received as of April 9, 2013 are being forwarded for approval at this time.

BUDGET CONSIDERATION / FINANCIAL IMPACT:

None. Through the CMP, MSIF and TFCA, the Air District distributes "pass-through" funds to public agencies and private entities on a reimbursement basis. Administrative costs for both programs are provided by each funding source.

Respectfully submitted,

Jack P. Broadbent
Executive Director/APCO

Prepared by: Tina McRee
Reviewed by: Damian Breen

Attachment 1: BAAQMD Year 14 Carl Moyer Program/Mobile Source Incentive Fund projects with grant awards greater than $100,000 (evaluated between 3/13/13 and 4/9/13)

Attachment 2: Summary of all CMP Year 14/MSIF and VIP approved and eligible projects (as of 4/9/13)

Agenda 4 - ATTACHMENT 1
BAAQMD Year 14 Carl Moyer Program/Mobile Source Incentive Fund projects with grant awards greater than $100,000 (evaluated between 3/13/13 and 4/9/13)

Project #	Applicant name	Equipment category	Project type	Proposed contract award	Emission Reductions (Tons per year)			County
					NOx	ROG	PM	
14MOY33	West Coast Chip Harvesters dba EcoMulch	Off-road	Replacement of one (1) off-road diesel-powered loader.	$204,374.00	2.267	0.249	0.099	Contra Costa
14MOY35	Custom Tractor Service	Off-road	Replacement of one (1) off-road diesel-powered agricultural tractor.	$156,115.00	0.784	0.087	0.035	Sonoma
Total				$360,489.00	3.051	0.336	0.134	

Agenda 4 - ATTACHMENT 2
Summary of all CMP Yr 14/ MSIF and VIP approved and eligible projects
(As of 4/9/13)

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
14MOY2	Off-road	Loader replacement	1	$45,176.00	Bordessa Dairy	0.135	0.023	0.007	APCO	Sonoma
14MOY3	Off-road	Loader replacement	1	$98,511.00	Blakes Landing Farms, Inc. (Dairy)	0.448	0.078	0.028	APCO	Marin
14MOY8	Off-road	Tractor replacement	1	$24,400.00	Lamoreaux Vineyards LLC	0.116	0.024	0.008	APCO	Napa
14MOY9	Off-road	Tractor replacement	1	$23,241.00	Andrea Bartolucci dba Madonna Estate (Vineyard)	0.098	0.020	0.007	APCO	Napa
14MOYL1	Locomotive	Wayside power installation	8	$330,000.00	Peninsula Corridor Joint Powers Board	1.488	0.079	0.032	12/5/2012	Santa Clara
14MOY5	Off-road	Loader & backhoe replacement	2	$178,805.00	SOILAND Co Inc.	1.540	0.118	0.043	12/5/2012	Sonoma
14MOY16	Off-road	Tractor replacement	8	$206,138.00	Stone Bridge Cellars Inc.	0.909	0.206	0.079	12/5/2012	Napa
14MOY6	Marine	Engine replacement	1	$46,484.00	Danny M Murray dba FV King Crab	0.633	0.010	0.020	APCO	San Francisco
14MOY18	Marine	Engine replacement	2	$80,970.00	James Townsend (Charter fishing)	0.297	0.007	0.011	APCO	Contra Costa
14MOY15	Off-road	Tractor replacement	1	$15,776.00	Ronald Smith (Vineyard farming & field maintenance)	0.022	0.020	0.004	APCO	Napa
14MOY10	Off-road	Tractor replacement	1	$32,184.00	Morrison Ranch	0.120	0.024	0.007	APCO	Solano
14MOY12	Off-road	Tractor replacement	2	$55,056.00	Donald W. Johnson dba Gordon Valley Farms	0.298	0.057	0.027	APCO	Solano
14MOY20	Off-road	Loader replacement	1	$113,738.00	MCE Amos Inc	0.533	0.092	0.033	TBD	Sonoma
14MOY26	Marine	Engine replacement	1	$97,460.00	Paul Lourenco (Commercial fishing)	0.732	0.029	0.029	APCO	San Mateo
14MOY27	Marine	Engine replacement	4	$455,162.00	Lehigh Hanson (Tug boat)	13.244	0.315	0.463	3/6/2013	Contra Costa
14MOY19	Off-road	Tractor replacement	1	$21,097.00	Arcadia Vineyards, LLC	0.133	0.025	0.009	APCO	Napa
14MOY29	Off-road	Loader replacement	1	$125,039.00	McClelland's Dairy	1.062	0.135	0.046	TBD	Sonoma
14MOY23	Marine	Engine replacement	2	$78,640.00	University of California Fleet Services	0.302	-0.006	0.011	APCO	Sonoma

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
14MOY21	Off-road	Tractor replacement	1	$25,620.00	Abel Tirado dba Tirado Vineyards	0.175	0.035	0.013	APCO	Napa
14MOY30	Off-road	Loader replacement	1	$110,533.00	Dolcini Jersey Dairy	0.518	0.065	0.022	TBD	Marin
14MOY31	Off-road	Loader replacement	1	$110,533.00	Andrew J. Poncia dba Poncia Fertilizer Spreading	0.852	0.146	0.053	TBD	Sonoma
14MOY32	Off-road	Loader replacement	1	$125,505.00	St. Helena Aggregates	0.789	0.093	0.034	TBD	Napa
14MOY25	Off-road	Tractor replacement	5	$94,463.00	Bayview Vineyards Corp	0.649	0.168	0.045	APCO	Napa
14MOY33	Off-road	Loader replacement	1	$204,374.00	West Coast Chip Harvesters dba EcoMulch	2.267	0.249	0.099	TBD	Contra Costa
14MOY35	Off-road	Tractor replacement	1	$156,115.00	Custom Tractor Service	0.784	0.087	0.035	TBD	Sonoma
VIP72	VIP	Truck replacement	1	$45,000.00	Bhin Trucking LLC	2.786	0.056	0.000	APCO	Santa Clara
VIP73	VIP	Truck replacement	1	$40,000.00	Bhin Trucking LLC	2.458	0.049	0.000	APCO	Santa Clara
VIP75	VIP	Truck replacement	1	$40,000.00	Kirvin Holtz	2.481	0.052	0.000	APCO	Sonoma
VIP77	VIP	Truck replacement	1	$15,000.00	Michael Feuquay	0.306	0.008	0.000	APCO	Santa Clara
VIP78	VIP	Truck replacement	1	$35,000.00	Michael Feuquay	1.380	0.020	0.040	APCO	Santa Clara
VIP79	VIP	Truck replacement	1	$25,000.00	Michael Feuquay	1.006	0.015	0.029	APCO	Santa Clara
VIP80	VIP	Truck replacement	1	$45,000.00	Ernest Gonzales	2.735	0.086	0.000	APCO	Alameda
VIP81	VIP	Truck replacement	1	$35,000.00	Santos Construction Inc.	2.149	0.056	0.000	APCO	Contra Costa
VIP84	VIP	Truck replacement	1	$10,000.00	San Miguel Trans Inc	0.629	0.013	0.000	APCO	Sonoma
VIP87	VIP	Truck replacement	1	$35,000.00	Gill Hardial Singh	0.714	0.018	0.000	APCO	Alameda
VIP89	VIP	Truck replacement	1	$10,000.00	T1 Trucking, Inc.	0.205	0.004	0.000	APCO	San Mateo
VIP90	VIP	Truck replacement	1	$45,000.00	Guidotti Trucking, Inc.	0.929	0.019	0.000	APCO	Santa Clara
VIP92	VIP	Truck replacement	1	$20,000.00	Sequoia Landscape Mtls, Inc.	0.412	0.009	0.000	APCO	Sonoma
VIP95	VIP	Truck replacement	1	$45,000.00	Brian Russel Raven DBA: Raven Trucking	0.905	0.013	0.000	APCO	Solano

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
VIP96	VIP	Truck replacement	1	$40,000.00	Bernardini Enterprises, Inc.	0.819	0.016	0.000	APCO	San Mateo
VIP99	VIP	Truck replacement	1	$30,000.00	Bernardini Enterprises, Inc. DBA JD Services	0.615	0.012	0.000	APCO	San Mateo
VIP100	VIP	Truck replacement	1	$35,000.00	Bernardini Enterprises, Inc. DBA JD Services	0.517	0.007	0.010	APCO	San Mateo
VIP101	VIP	Truck replacement	1	$25,000.00	GradeTech, Inc.	0.519	0.010	0.010	APCO	Contra Costa
VIP102	VIP	Truck replacement	1	$20,000.00	D Hill Trucking	0.420	0.009	0.010	APCO	Alameda
VIP103	VIP	Truck replacement	1	$45,000.00	Express Freight Systems	0.645	0.009	0.014	APCO	Alameda
VIP104	VIP	Truck replacement	1	$25,000.00	D Foskett Trucking, Inc.	0.519	0.010	0.000	APCO	Contra Costa
VIP105	VIP	Truck replacement	1	$45,000.00	Fred Campigli DBA Fred Campigli Trucking	0.905	0.013	0.000	APCO	Sonoma
VIP106	VIP	Truck replacement	1	$25,000.00	DW Heavy Equipment	0.411	0.002	0.006	APCO	Sonoma
VIP107	VIP	Truck replacement	1	$45,000.00	Express Freight Systems	0.645	0.009	0.014	APCO	Alameda
VIP108	VIP	Truck replacement	1	$45,000.00	Patricia A. Smith	0.923	0.019	0.000	APCO	San Bernardino
VIP109	VIP	Truck replacement	1	$45,000.00	Kellogg Distribution, Inc.	0.929	0.019	0.000	APCO	Sacramento
VIP110	VIP	Truck replacement	1	$45,000.00	George V. Medeiros	0.905	0.013	0.000	APCO	Sonoma
VIP111	VIP	Truck replacement	1	$45,000.00	Lloyd A. Johnson	0.905	0.013	0.000	APCO	Alameda
VIP112	VIP	Truck replacement	1	$45,000.00	Vinh Quang Tran	0.905	0.013	0.000	APCO	Santa Clara
VIP113	VIP	Truck replacement	1	$45,000.00	Calstone Co.	0.900	0.030	0.000	APCO	Santa Clara
VIP114	VIP	Truck replacement	1	$45,000.00	Ricardo Avila	0.905	0.013	0.000	APCO	Santa Clara
VIP115	VIP	Truck replacement	1	$45,000.00	Chad Robert Jacobson	0.905	0.013	0.000	APCO	Santa Clara
VIP116	VIP	Truck replacement	1	$25,000.00	Goats R Us	0.513	0.008	0.000	APCO	Contra Costa
VIP117	VIP	Truck replacement	1	$45,000.00	Bill Jacobson Trucking Co.	0.905	0.013	0.000	APCO	Santa Clara
VIP118	VIP	Truck replacement	1	$35,000.00	Gurpal Singh	0.692	0.025	0.000	APCO	Alameda
VIP119	VIP	Truck replacement	1	$45,000.00	Scott M. Long	0.905	0.013	0.000	APCO	Alameda
VIP120	VIP	Truck replacement	1	$40,000.00	A.L. Vazquez Trucking	0.811	0.012	0.000	APCO	Santa Clara
Total	**62**	**Projects**	**87**	**$4,185,020.00**	**-**	**64.355**	**2.819**	**1.297**	-	-

Figure 1: CMP/ MSIF Funding Distribution by Equipment Category as of 4/9/13

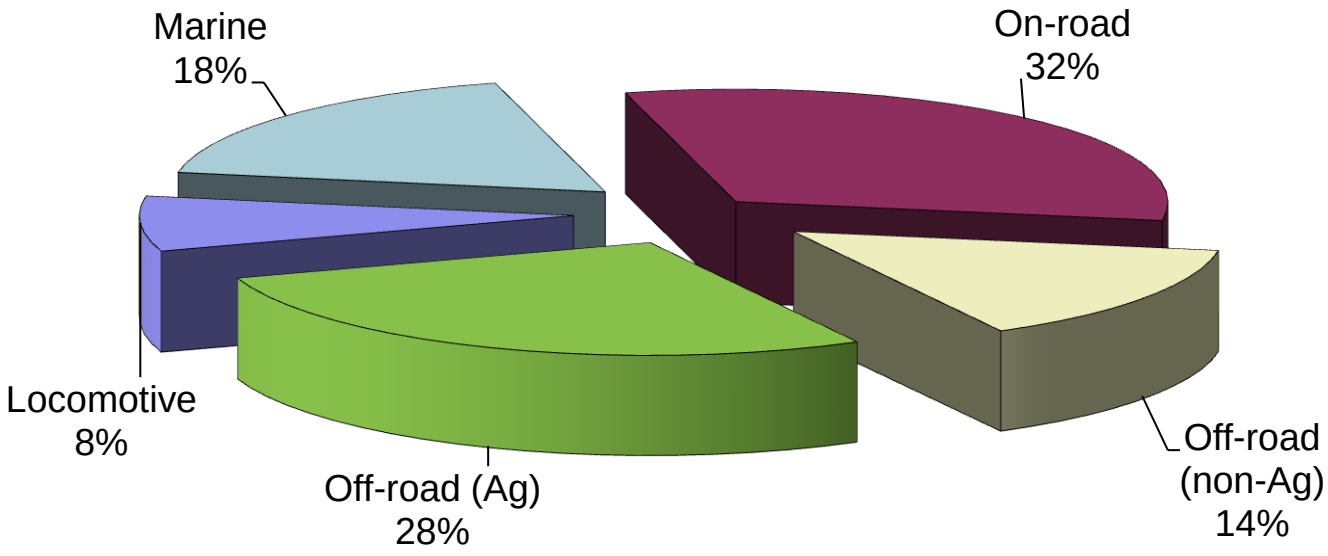
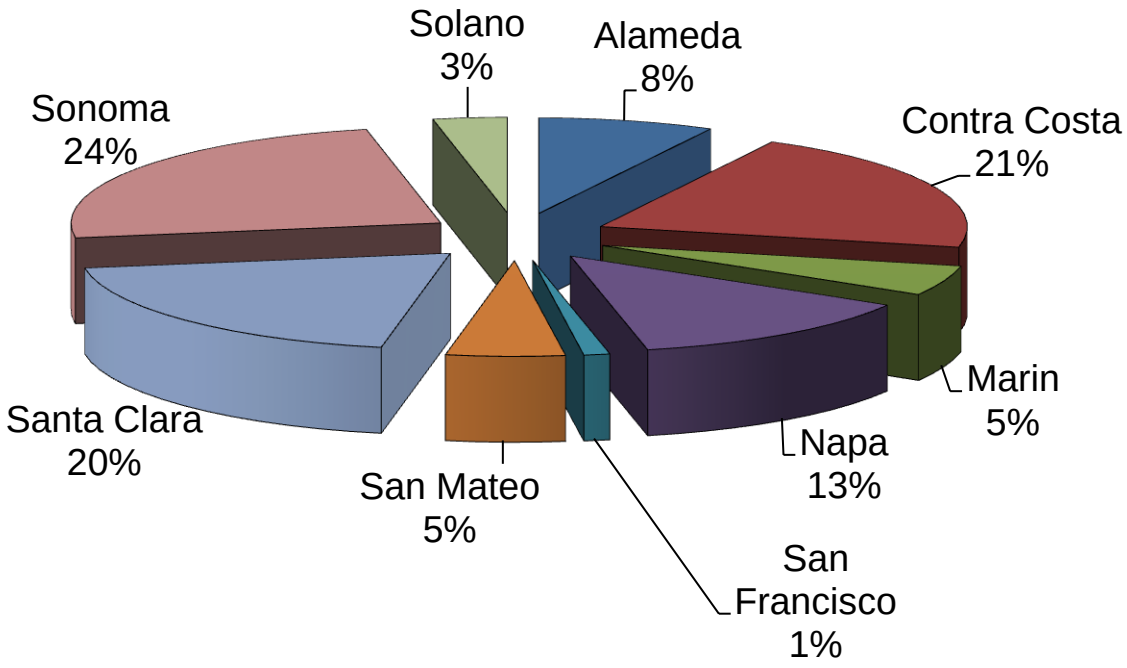


Figure 2: CMP/ MSIF Funding Distribution by County as of 4/9/13



BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Scott Haggerty and Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 15, 2013

Re: Fiscal Year Ending (FYE) 2014 Transportation Fund for Clean Air (TFCA) County Program Manager Expenditure Plans

RECOMMENDED ACTIONS:

Recommend Board of Directors:

1. Approve the allocation of FYE 2014 TFCA County Program Manager Funds listed on Table 1.

2. Authorize the Executive Officer/APCO to enter into funding agreements with the County Program Managers for the total funds to be programmed in FYE 2014, listed on Table 1.

BACKGROUND

In 1991, the California State Legislature authorized the Bay Area Air Quality Management District (Air District) to impose a $4 surcharge on motor vehicles registered within the nine-county Bay Area to fund projects that reduce on-road motor vehicle emissions. The Air District has allocated these funds to its Transportation Fund for Clean Air (TFCA) to fund eligible projects. The statutory authority for the TFCA and requirements of the program are set forth in California Health and Safety Code Sections 44241 and 44242.

By law, forty percent (40%) of these revenues are distributed to the designated County Program Manager in each of the nine counties within the Air District's jurisdiction. The portion distributed to each County Program Manager is based on the fees generated in each county. Every year, each County Program Manager submits to the Air District an expenditure plan application specifying the funding available for projects within its county for the upcoming fiscal year. The authorizing legislation requires that each Program Manager allocate their available FYE 2014 funds within six months of the Air District Board of Director's approval of the Expenditure Plan.

DISCUSSION

The FYE 2014 TFCA County Program Manager Fund Policies were adopted by the Air District's Board of Directors on November 7, 2012. The Air District issued the *County Program Manager Fund Expenditure Plan Guidance for FYE 2014* to County Program Managers on December 7, 2012. All nine County Program Managers submitted compliant expenditure plan applications by the March 4, 2013 deadline.

Table 1 below lists the total funds available to be programmed in FYE 2014 by the nine County Program Managers. The total for each county is the sum of the estimated new funding available to each County Program Manager in FYE 2014 (based on the estimated motor vehicle registrations for that county), the interest earned by the County Program Manager on TFCA funds received previously, and any funds available for reprogramming from County Program Manager projects that were completed under budget or canceled in the previous fiscal year.

Table 1: FYE 2014 Funding for County Program Managers

County Program Manager	Est. *New* FYE 2014 TFCA Funds	Interest earned on TFCA Funds	TFCA Funds to be Reprogrammed	*Total* Funds to be Programmed in FYE 2014
Alameda County Transportation Commission	$1,896,911.40	$11,091.39	$75,664.26	**$1,983,667.05**
Contra Costa Transportation Authority	$1,385,825.21	$9,086.00	$5,307.93	**$1,400,219.14**
Transportation Authority of Marin	$354,715.18	$2,601.51	$181,175.50	**$538,492.19**
Napa County Transportation Planning Agency	$192,329.45	$4,000.09	$2,103.37	**$198,432.91**
San Francisco County Transportation Authority	$731,772.90	$4,421.71	$62,610.36	**$798,804.97**
San Mateo City/County Association of Governments	$1,054,311.22	$2,142.00	$7,073.20	**$1,063,526.42**
Santa Clara Valley Transportation Agency	$2,349,835.22	$50,264.19	$233,555.97	**$2,633,655.38**
Solano Transportation Authority	$303,537.64	$620.59	$0	**$304,158.23**
Sonoma County Transportation Authority	$585,512.78	$5,230.94	$10,838.10	**$601,581.82**
TOTALS	***$8,854,751.00***	***$89,458.42***	***$578,328.69***	***$9,522,538.11***

BUDGET CONSIDERATION/FINANCIAL IMPACT:

None. TFCA County Program Manager revenues are generated from a dedicated outside funding source and are passed through to County Program Managers.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Geraldina Grünbaum
Reviewed by: Karen Schkolnick

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Scott Haggerty and Members of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 15, 2013

Re: Lower-Emission School Bus Program

RECOMMENDATIONS

Recommend Board of Directors:

1. Allocate $13.21 million in Mobile Source Incentive Funding (MSIF) to the Lower-Emission School Bus Program (LESBP), and
2. Authorize the Executive Officer/APCO to enter into funding agreements with applicants meeting the requirements of the ARB's 2008 LESBP.

BACKGROUND

The Bay Area Air Quality Management District (Air District) has participated in the Lower-Emission School Bus Program (LESBP) since its creation in fiscal year 2000-2001 by the California Air Resources Board (ARB). As of April 15, 2008, the program has been subject to ARB's 2008 LESBP Guidelines, which provide for:

- The replacement of 1993 model year and older public school buses,
- The retrofitting of 1987 model year and newer school buses, and
- The replacement of on-board compressed natural gas (CNG) fuel tanks on public school buses between 14 and 16 years old (new guideline, as of December 11, 2011).

The 2008 LESBP Guidelines cap the funding amount at $20,000 per bus for CNG tank replacement and school bus retrofit projects. The Air District's Board of Directors previously authorized award amounts of up to $165,000 for the purchase of new diesel buses and $170,000 for the purchase of alternative-fueled buses. These amounts also include funding that covers a school district match of $25,000 per bus required by the 2008 LESBP Guidelines.

Under the 2008 LESBP Guidelines, the Air District was allocated just over $8.5 million in California Goods Movement Bond (I-Bond) funding. This allocation, along with the interest earned on these funds, provided for $8.2 million to fund eligible projects and approximately $440,000 for program administration. This I-Bond funding was augmented by nearly $23.6 million in MSIF funds authorized for allocation by the Air District's Board of Directors on July 30, 2008, February 4, 2009, November 3, 2010, June 15, 2011, and May 2, 2012.

DISCUSSION

Completed Projects

To date under the 2008 LESBP Guidelines, the Air District has retrofitted 290 school buses at 30 public school districts and public school transportation providers (Attachment 1) and replaced 107 public school buses at 37 public school districts (Attachment 2) across the Bay Area. Over $21.2 million have been expended, including $8.2 million in I-Bond funds ($5.3 million for retrofits and $2.9 million for bus replacements) and $13 million in MSIF funding for bus replacements, leaving a balance of approximately $10.6 million in MSIF funding available from previous allocations.

Current Solicitation

To allocate MSIF funding, the Air District conducted a call for grant applications for all three eligible project types. The call for retrofits and CNG tank replacements ran from May 24, 2012 to March 15, 2013, while the call for bus replacements ran from January 28, 2013 to March 15, 2013.

Over this solicitation period, the Air District received a total of 51 applications, requesting over $23.2 million in funding, leaving a shortfall of approximately $12.7 million based on the funding currently available from previous allocations. Of these applications, nine were for CNG tank replacements on 67 public school buses for just over $1.3 million (Attachment 3), 10 were for nearly $2.65 million to retrofit 131 school buses (Attachment 4), and 32 were for nearly $19.3 million to replace 125 public school buses (Attachment 5).

Given the 2008 LESBP Guideline's limits on the eligibility age for CNG tank replacements, the Air District prioritized funding for CNG tank replacement projects and has in the past six months awarded just over $1.3 million in MSIF funding to nine public school districts. These projects are currently underway, and are scheduled for completion by October 31, 2013.

Based on a preliminary evaluation of the retrofit and bus replacement applications received, the Air District will be awarding up to $9.2 million funds to the next highest ranked projects. In keeping with the funding priority prescribed by the 2008 LESBP Guidelines (oldest buses replaced first), staff also will provide funding to retrofit all buses for which funds were requested (131 buses requesting $2.65 million) as well as to replace all 1986 model year or older public school buses for which funds were requested (three buses for just over $550,000) in line with Board direction from previous funding allocations.

With these awards, a balance of approximately $6.0 million in MSIF funding will remain as well as applications for $18.8 million to replace an additional 122 1986-1993 model year public school buses. In order to meet this demand for funds, staff is recommending that an additional $13.21 million in funding be allocated to the LESBP from MSIF. This funding would allow all current eligible applications to be funded and leave a balance of at least $550,000 for CNG tank replacements projects that will become eligible for funding later this year. This funding is the available balance of new and unspent funds in the MSIF.

BUDGET CONSIDERATION/FINANCIAL IMPACT:

None. Through the MSIF the Air District distributes "pass-through" funds to grantees on a reimbursement basis. Administrative costs for this program are provided by the funding source.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Deepti Jain
Reviewed by: Karen Schkolnick

Attachment 1: Completed Retrofit Projects (I-Bond Funding)
Attachment 2: Completed Bus Replacement Projects (I-Bond and MSIF Funding)
Attachment 3: Active CNG Tank Replacement Projects (MSIF Funding)
Attachment 4: Retrofit Funding Requests
Attachment 5: Replacement Funding Requests

Agenda 6 - ATTACHMENT 1
Completed Retrofit Projects (I-Bond Funding)

Project Number	School District	City	County	# Retrofit Devices	Total Paid
08SBPM01	Novato Unified School District	Novato	Marin	14	$ 280,000.00
08SBPM02	Shoreline Unified School District	Tomales	Marin	9	$ 174,852.18
08SBPM03	Dixie School District	San Rafael	Marin	3	$ 45,256.22
08SBPM05	Petaluma Joint Union High School District	Petaluma	Sonoma	8	$ 159,999.12
08SBPM06	Fairfield-Suisun Unified School District	Fairfield	Solano	8	$ 152,483.65
08SBPM07	Milpitas Unified School District	Milpitas	Santa Clara	5	$ 100,000.00
08SBPM08	Liberty Union High School	Brentwood	Contra Costa	9	$ 175,189.42
08SBPM09	Michaels Transportation	Vallejo	Alameda, Contra Costa, Marin, Solano	40	$ 689,710.43
08SBPM11	Antioch Unified School District	Antioch	Contra Costa	8	$ 150,179.16
08SBPM12	Pacifica School District	Pacifica	San Mateo	1	$ 20,000.00
08SBPM14	Bolinas/Stinson Union School District	Bolinas	Marin	2	$ 39,343.82
08SBPM15	West County Transportation Agency	Santa Rosa	Sonoma	5	$ 82,337.71
08SBPM21	Hayward Unified School District	Hayward	Alameda	2	$ 40,000.00
08SBPM22	Mountain View Whisman School District	Mountain View	Santa Clara	3	$ 60,000.00
08SBPM23	Campbell Union High School District	San Jose	Santa Clara	1	$ 16,777.89
08SBPM24	First Student	Richmond, San Jose, Santa Rosa, San Francisco	Contra Costa, Santa Clara, Sonoma, San Francisco	66	$ 1,153,246.95
08SBPM25	Gilroy Unified School District	Gilroy	Santa Clara	17	$ 336,734.51
08SBPM26	Moreland School District	San Jose	Santa Clara	6	$ 106,147.48
08SBPM27	River Delta Unified School District	Rio Vista	Solano	13	$ 248,734.28
08SBPM28	Fairfield-Suisun Unified School District	Fairfield	Solano	2	$ 30,791.00
08SBPM29	Windsor Unified School District	Windsor	Sonoma	7	$ 140,000.00
08SBPM30	Solano County Office of Education	Fairfield	Solano	3	$ 50,350.33
08SBPM31	West County Transportation Agency	Santa Rosa	Sonoma	7	$ 124,159.91
08SBPM32	CYO Transportation	San Francisco	San Francisco	16	$ 305,919.06
08SBPM33	Knightsen Elementary School District	Knightsen	Contra Costa	2	$ 39,810.60
08SBPM34	Palo Alto Unified School District	Palo Alto	Santa Clara	2	$ 35,370.42
08SBPM36	San Ramon Valley Unified School District	Danville	Contra Costa	15	$ 283,855.81
08SBPM38	Cupertino Union School District	Cupertino	Santa Clara	4	$ 77,257.99
08SBPM39	Dixie School District	San Rafael	Marin	2	$ 30,474.21
08SBPM40	Santa Clara Unified School District	Santa Clara	Santa Clara	10	$ 199,987.22
30	**Project Sponsors**		**Total**	**290**	**$ 5,348,969.37**

Agenda 6 - ATTACHMENT 2

Completed Bus Replacement Projects (I-Bond and MSIF Funding)

Project Number	School District/JPA	City	County	Type	Total	Total Paid
08LESBP01	Campbell Union High School District	San Jose	Santa Clara	Diesel	1	$ 140,181.95
08LESBP02	Jefferson Union High School District	Daly City	San Mateo	Diesel	4	$ 562,389.07
08LESBP04	Morgan Hill Unified School District	Morgan Hill	Santa Clara	Diesel	4	$ 572,636.88
08LESBP05	Morgan Hill Unified School District	Morgan Hill	Santa Clara	Diesel	2	$ 288,963.20
08LESBP06	Travis Unified School District	Fairfield	Solano	Diesel	3	$ 442,644.41
08LESBP07	Fremont Unified School District	Fremont	Alameda	Diesel	3	$ 464,063.07
08LESBP08	Sonoma Valley Unified School District	Sonoma	Sonoma	Diesel	1	$ 148,065.43
08LESBP09	Pope Valley Union School District	Pope Valley	Napa	Propane	2	$ 265,444.43
08LESBP10	San Lorenzo Unified School District	San Lorenzo	Alameda	Diesel	1	$ 146,987.07
08LESBP11	Antioch Unified School District	Antioch	Contra Costa	Diesel	8	$ 992,718.28
08LESBP13	Campbell Union School District	Campbell	Santa Clara	CNG	3	$ 510,000.00
08LESBP14	Calistoga Joint Unified School District	Calistoga	Napa	Diesel	2	$ 288,315.82
08LESBP15	New Haven Unified School District	Union City	Alameda	Diesel	2	$ 290,285.60
08LESBP16	West County Transportation Agency	Santa Rosa	Sonoma	CNG	5	$ 850,000.00
08LESBP17	Napa Valley Unified School District	Napa	Napa	Hybrid	1	$ 141,858.68
08LESBP20	Hayward Unified School District	Hayward	Alameda	Diesel	1	$ 151,269.05
08LESBP22	Hayward Unified School District	Hayward	Alameda	Diesel	4	$ 651,867.37
08LESBP26	San Ramon Valley Unified School District	Danville	Contra Costa	Diesel	3	$ 389,505.66
08LESBP27	Hayward Unified School District	Hayward	Alameda	Diesel	1	$ 162,836.44
08LESBP28	Fremont Unified School District	Fremont	Alameda	Diesel	1	$ 164,375.67
08LESBP29	Petaluma Joint Union High School District	Petaluma	Sonoma	Diesel	1	$ 163,471.24
08LESBP30	Franklin-McKinley School District	San Jose	Santa Clara	Diesel	6	$ 710,542.56
08LESBP33	Cupertino Union School District	Cupertino	Santa Clara	Diesel	4	$ 651,677.48
08LESBP34	San Mateo Union High School District	San Mateo	San Mateo	Diesel	1	$ 72,703.52
08LESBP35	Loma Prieta Joint Union School District	Los Gatos	Santa Clara	Diesel	1	$ 121,508.46
08LESBP36	Liberty Union High School District	Brentwood	Contra Costa	Diesel	1	$ 154,352.27
08LESBP37	Windsor Unified School District	Windsor	Sonoma	CNG	2	$ 336,863.88
08LESBP39	Sonoma Valley Unified School District	Sonoma	Sonoma	Diesel	1	$ 163,270.62
08LESBP40	Mountain View Whisman School District	Mountain View	Santa Clara	Diesel	1	$ 163,311.04
08LESBP44	Santa Clara Unified School District	Santa Clara	Santa Clara	Diesel	2	$ 325,835.74
08LESBP45	San Jose Unified School District	San Jose	Santa Clara	4 CNG, 3 Diesel	7	$ 1,167,678.75
08LESBP46	Alum Rock Union School District	San Jose	Santa Clara	Diesel	6	$ 824,237.40
08LESBP47	Napa Valley Unified School District	Napa	Napa	Hybrid/Electric	7	$ 1,014,161.16
08LESBP48	Mount Diablo Unified School District	Concord	Contra Costa	CNG	10	$ 1,684,499.50
08LESBP49	Palo Alto Unified School District	Palo Alto	Santa Clara	CNG	1	$ 94,311.70
08LESBP50	Berkeley Unified School District	Berkeley	Alameda	Diesel	3	$ 466,313.59
08LESBP51	Morgan Hill Unified School District	Morgan Hill	Santa Clara	Diesel	1	$ 135,607.50
37	**Project Sponsors**			**Total**	**107**	**$ 15,874,754.49**

Agenda 6 - ATTACHMENT 3

Active CNG Tank Replacement Projects (MSIF Funding)

Project #	School District/Joint Powers Authority	City	County	# Buses	Total Award
12SBTR01	Napa Valley Unified School District	Napa	Napa	17	$338,399
12SBTR02	Campbell Union School District	Campbell	Santa Clara	4	$79,934
12SBTR03	West County Transportation Agency	Santa Rosa	Sonoma	17	$339,059
12SBTR04	Hayward Unified School District	Hayward	Alameda	1	$20,000
12SBTR05	Old Adobe Union School District	Petaluma	Sonoma	1	$19,945
12SBTR06	Ravenswood City School District	East Palo Alto	San Mateo	6	$119,901
12SBTR07	San Ramon Valley Unified School District	Danville	Contra Costa	4	$79,934
12SBTR08	Fremont Unified School District	Fremont	Alameda	12	$240,000
12SBTR09	Berkeley Unified School District	Berkeley	Alameda	5	$100,000
9	**Project Sponsors**		**Total**	**67**	**$1,337,171**

Agenda 6 - ATTACHMENT 4
Retrofit Funding Requests

Project Number	School District/Transportation Company	City	County	# Retrofit Devices	Total $ Requested
13SBPM01	Campbell Union School District	Campbell	Santa Clara	3	$52,539
13SBPM02	Oak Grove School District	San Jose	Santa Clara	17	$339,678
13SBPM03	San Bruno Park School District	San Bruno	San Mateo	1	$21,577
13SBPM05	Windsor Unified School District	Windsor	Sonoma	6	$123,490
13SBPM06	First Student, Inc.	San Francisco, San Jose, Richmond	Santa Clara, Contra Costa, San Francisco	63	$1,247,676
13SBPM07	Student Transportation of America	Union City	Alameda	4	$80,973
13SBPM08	Cabrillo Unified School District	Half Moon Bay	San Mateo	5	$114,867
13SBPM09	Berkeley Unified School District	Berkeley	Alameda	5	$117,083
13SBPM10	National Express Corporation DBA Durham School Services	San Jose, Concord	Contra Costa, Santa Clara	15	$300,986
13SBPM11	Vallejo City Unified School District	Vallejo	Solano	12	$255,562
10	**Project Sponsors**		**Total**	**131**	**$2,654,432**

Project Number	School District/JPA	City	County	# CNG	# Diesel	# Electric	# Propane	# Hybrid/ Electric	Total	Total $ Requested
13LESBP01	San Ramon Valley Unified School District	Danville	Contra Costa	0	2	0	0	0	2	$272,962
13LESBP02	Santa Clara Unified School District	Santa Clara	Santa Clara	0	6	0	0	0	6	$990,000
13LESBP03	San Lorenzo Unified School District	San Lorenzo	Alameda	0	3	0	0	0	3	$477,730
13LESBP04	Shoreline Unified School District	Tomales	Marin	0	2	0	0	0	2	$329,286
13LESBP05	Solano County Office of Education	Fairfield	Solano	0	2	0	0	0	2	$330,000
13LESBP06	Antioch Unified School District	Antioch	Contra Costa	0	3	0	0	0	3	$419,718
13LESBP07	Sonoma Valley Unified School District	Sonoma	Sonoma	0	3	0	0	0	3	$494,707
13LESBP08	San Mateo Union High School District	San Mateo	San Mateo	0	1	0	0	0	1	$84,757
13LESBP09	Liberty Union High School District	Brentwood	Contra Costa	0	3	0	0	0	3	$451,587
13LESBP10	Loma Prieta Joint Union School District	Lost Gatos	Santa Clara	0	1	0	0	0	1	$165,000
13LESBP11	West County Transportation Agency	Santa Rosa	Sonoma	7	0	0	0	0	7	$1,189,978
13LESBP12	Napa Valley Unified School District	Napa	Napa	2	0	1	2	8	13	$2,016,851
13LESBP13	Morgan Hill Unified School District	Morgan Hill	Santa Clara	0	1	0	0	0	1	$142,231
13LESBP14	Fremont Unified School District	Fremont	Alameda	0	5	0	0	0	5	$824,904
13LESBP15	Mountain View Whisman School District	Mountain View	Santa Clara	0	5	0	0	0	5	$657,500
13LESBP16	Moreland School District	San Jose	Santa Clara	0	2	0	0	0	2	$329,913
13LESBP17	Hayward U.S.D	Hayward	Alameda	0	2	0	0	0	2	$310,843
13LESBP18	Sunnyvale School	Sunnyvale	Santa Clara	0	1	0	0	0	1	$169,988
13LESBP19	Windsor Unified School District	Windsor	Sonoma	0	2	0	0	0	2	$311,519
13LESBP20	Mt. Diablo Unified School District	Concord	Contra Costa	2	0	0	0	0	2	$339,999
13LESBP21	Bolinas Stinson Beach Unified School District	Bolinas	Marin	0	1	0	0	0	1	$164,371
13LESBP22	Campbell Union High School District	San Jose	Santa Clara	0	2	0	0	0	2	$329,657
13LESBP23	Travis Unified School District	Fairfield	Solano		5	0	0	0	5	$739,561
13LESBP24	Rincon Valley Union School District	Santa Rosa	Sonoma	0	1	0	0	0	1	$164,902
13LESBP25	Sequoia Union High School District	Redwood City	San Mateo	0	4	0	0	0	4	$611,457
13LESBP26	Sonoma Valley Unified School District	Sonoma	Sonoma	0	1	0	0	0	1	$143,742
13LESBP28	East Side Union High School District	San Jose	Santa Clara	0	4	0	0	0	4	$657,084
13LESBP29	Las Lomitas Elementary School District	Menlo Park	San Mateo	0	2	0	0	0	2	$330,000
13LESBP30	Vallejo City Unified School District	Vallejo	Solano	0	23	0	0	0	23	$3,461,996
13LESBP31	Fairfield-Suisun Unified School District	Fairfield	Solano	0	11	0	0	0	11	$1,608,809
13LESBP32	Castro Valley Unified School District	Castro Valley	Alameda	0	4	0	0	0	4	$659,924
13LESBP33	Pacifica School District	Pacifica	San Mateo	1	0	0	0	0	1	$82,639
32	**Project Sponsors**			**12**	**102**	**1**	**2**	**8**	**125**	**$19,263,614**

BAY AREA AIR QUALITY MANAGEMENT DISTRICT
Memorandum

To: Chairperson Ash Kalra and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: April 23, 2013

Re: Public Hearing to Consider Adoption of Proposed Regulation 12: Miscellaneous Standards of Performance, Rule 13: Foundry and Forging Operations and Regulation 6: Particulate Matter, Rule 4: Metal Recycling and Shredding Operations; and Proposed Amendments to Regulation 2: Permits, Rule 1: General Requirements, and the approval of a Negative Declaration pursuant to the California Environmental Quality

RECOMMENDED ACTION:

Staff recommends that the Board of Directors:

- Adopt Proposed Regulation 12: Miscellaneous Standards of Performance, Rule 13: Foundry; Forging Operations and Regulation 6: Particulate Matter, Rule 4: Metal Recycling and Shredding Operations; and proposed amendments to Regulation 2: Permits, Rule 1: General Requirements;
- Approve a Negative Declaration pursuant to the California Environmental Quality Act (CEQA) for the proposed rule and amendments.

BACKGROUND

Foundries (metal melting and casting), forges (heat treatment of metal), and metal recycling and shredding operations are sources of emissions of particulate matter (PM) (including metals that are listed as toxic air contaminants) and other pollutants. Foundries can also be sources of odorous substances from casting operations. Process emissions are those from the major pieces of equipment at these facilities, such as metal melting furnaces, molds into which molten metal is poured, and auto shredders. These process emissions typically are vented through various types of pollution control equipment to a stack before they enter the atmosphere. Fugitive emissions are those that are not vented through a defined stack; they may enter the atmosphere through doors, windows or from open work areas. Process emissions from the facilities potentially affected by the proposed rules are highly controlled through the application of a number of regulations, including federal toxics regulations (National Emissions Standards for Hazardous Air Pollutants or NESHAP), one California Airborne Toxics Control Measure, and District regulations and permit conditions, including those in federally enforceable Title V permits.

Staff has evaluated these industrial sectors and determined that, because process emissions are already highly regulated, fugitive emissions are more than half the total emissions from these facilities. They are difficult to control by applying conventional air pollution control techniques, and have the potential to impact neighboring residences and businesses (with most facilities being located within or near Community Air Risk Evaluation (CARE) program designated areas). The Air District has also received public complaints of odors from some facilities.

DISCUSSION

The proposed rules will implement control measure Stationary Source Measure #1 of the Bay Area 2010 Clean Air Plan. During this regulatory process, staff concluded that the most effective way to further reduce emissions of PM and odorous substances would be to focus on these fugitive emissions that are not fully addressed by existing regulations and which comprise the largest portion of these facilities' overall emissions (process and fugitive). Staff also concluded that the best way to reduce those emissions is through the implementation of measures and procedures that are specific to the unique design and operation of each facility. This would be accomplished through the development of facility-specific plans aimed at minimizing the fugitive emissions of these pollutants. These plans, called Emissions Minimization Plans, would be developed by each facility; released for public comment; and subject to Air District review, recommendations, and approval. In addition, the rules would require a periodic renewal, so that the measures in each Emissions Minimization Plan can be updated, and improved over time.

Regulation 12, Rule 13 will require foundries and forges that melt or heat treat more than 2500 tons of metal, other than certain aluminum metals and alloys, in a rolling twelve month period, to develop and implement an Emissions Minimization Plan that addresses fugitive emissions of particulate matter and odorous substances. Foundries and forges that process at least 1 ton of metal in a rolling twelve month period will be required to keep metal throughput records. Regulation 6, Rule 4 will require that metal recycling operations that have a metal throughput of more than 50,000 tons of metal scrap in a rolling twelve month period and that operate a metal shredder or receive or process scrap containing shredder residue to develop and implement an Emissions Minimization Plan to address fugitive emissions of particulate matter. Metal recycling operations that process 1000 tons or more in a rolling twelve month period will be required to keep records of metal throughput. The Air District will solicit public comment on facilities' draft Emissions Minimization Plans and then review any comments and make technically and economically feasible recommendations to the draft plans. Finally, the District will review final plans and approve or disapprove them, and the facilities would be required to implement the measures in the plans. The plans would be required to be renewed every five years. Foundries that use binders for castings containing odorous substances would also be required to investigate and report every two years on the efficacy and availability of binders that produce fewer odorous emissions to the ambient air. The focus on fugitive emissions from these facilities that may not be fully regulated or controlled also avoids costly duplication of existing rules and standards.

The proposed amendments to Regulation 2, Rule 1, Section 122 will remove an exemption for permits for shell core and shell-mold manufacturing machines. The use of these machines has the potential to create odors and removal of the exemption will allow evaluation when the machines are replaced or modified.

RULE DEVELOPMENT PROCESS

Staff has engaged in an extensive public consultation process throughout the development of these proposals. Staff has hosted numerous meetings, participated in numerous stakeholder-hosted meetings, held four workshops on the two initial draft proposals in June, 2011 and July 2012, and has received and considered a considerable amount of feedback from stakeholders.

The process involved two sets of public workshops, multiple meetings and conference calls with stakeholders, attendance at many community meetings, correspondence and telephone conferences with various governmental agencies, and numerous site visits. Staff published an initial draft proposal that was presented and discussed at the two workshops in July 2011 hosted in Oakland and Redwood City during which substantial comments were received. Subsequently, staff revised and published a second proposal, which was bifurcated into two rules for greater clarity. The two draft rules were presented at a second set of workshops held in July 2012, again in Oakland and Redwood City. The final proposals were published on March 7, 2013, along with a staff report, Socioeconomic and CEQA analyses. Updated versions of the final proposals were published on March 29, 2013. All comments received on the final proposals, summaries of the comments, and staff responses are included in Attachment 4A – Comments and Responses to Proposed Rule 12-13, Proposed Rule 6-4, and Proposed Amendments to Rule 2-1.

EMISSION REDUCTIONS AND ENVIRONMENTAL IMPACTS

Staff estimates of emissions of PM (both process emissions that are largely abated and fugitive emissions) from foundries and forges to be 102.1 tons per year (tpy). Of these, staff estimates fugitive emissions to be 57.3 tpy. Staff estimates that reductions of fugitive emissions due to the implementation of proposed Rule 12-13 would be about 5.7 tpy.

Process PM emissions from permitted equipment at metal recycling facilities are 5.7 tpy, but fugitive PM emissions are estimated to be considerably higher, 27.5 tpy (33.2 tpy total). Staff estimates that reductions of fugitive emissions due to the implementation of proposed Rule 6-4 would be 6.5 tpy.

Pursuant to the California Environmental Quality Act, the Air District has had an initial study for the proposed rule prepared by Environmental Audit, Inc. of Placentia, California, and this initial study concludes that there are no potential significant adverse environmental impacts associated with the proposed rule. A negative declaration (Attachment 4C – California Environmental Quality Act Initial Analysis and Negative Declaration) is proposed for approval by the District Board of Directors. One comment on the CEQA document was received, and the comment and staff response is included in Attachment 4C – California Environmental Quality Act Initial Analysis and Negative Declaration.

ECONOMIC IMPACTS

Staff estimates the cost to develop and complete the review and approval of an Emissions Minimization Plan would range between $750 and $3000 if developed by facility personnel. The cost of implementation of the plans would vary and would be largely dependent on the equipment, measures and/or procedures each facility opted to include in their plans. Case studies indicate that the costs of implementation can vary between $0 to as much as almost $500,000 per year, annualized. However, because plans would be developed by each facility and the District would only make recommendations after assessing their technical and economic feasibility, plan elements would be the most economical and effective options available to each facility.

A socioeconomic analysis conducted for these proposals is included as Attachment 4B – Socioeconomic Analysis of the staff report. The analysis concluded that the proposals would result in:

- No anticipated employment impacts are due to implementation of these rules;
- No foreseeable regional indirect or induced impacts;
- No significant impacts to small businesses due to the flexibility of plan requirements.

CHANGES TO THE RULES AFTER PUBLICATION

Staff has made minor changes to proposed Regulation 6, Rule 4 for clarity. These changes are not substantive and do not necessitate a continuation of the public hearing. The following provides summaries of the changes made to this rule. The changes are shown in strikethrough and underline format in Attachment 2 – Regulation 6 Particulate Matter, Rule 4 Metal Recycling and Shredding Operations.

Section 6-4-104.2: The limited exemption was clarified to state that the rule applies to facilities that shred metal, or that receive or process shredded metal.

Section 6-4-211: The definition of Scrap Dryer / Delacquering Kiln / Decoating Kiln was deleted because these operations are not affected by the proposed rule.

Section 6-4-212: The definition of Shredder Residue was modified to clarify that the term applies solely to the material that remains after metals have been extracted from scrapped material.

BUDGET CONSIDERATIONS/FINANCIAL IMPACTS

Although Air District staff resources would be affected by the review process associated with Emissions Minimization Plans, Inspection and Engineering staff is already familiar with the facilities. In addition, implementation of the control measures in plans is expected to reduce the amount of staff resources spent addressing complaints regarding these facilities, conserving both Air District and facility resources.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/air Pollution Control Officer

Prepared by: Victor Douglas
Reviewed by: Henry Hilken

Attachments:

1. Proposed Draft Regulation 12: Miscellaneous Standards of Performance, Rule 13: Foundry and Forging Operations
2. Proposed Draft Regulation 6: Particulate Matter, Rule 4: Metal Recycling and Shredding Operations
3. Proposed Draft amendments to Regulation 2: Permits, Rule 1: General Requirements
4. Air District Staff Report, including Appendices:
   - Appendix A: Comment and Responses to Proposed Rule 12-13, Proposed Rule 6-4, and Proposed Amendments to Rule 2-1
   - Appendix B: Socioeconomic Analysis
   - Appendix C: California Environmental Quality Act Initial Analysis and Negative Declaration

DRAFT March 2013

REGULATION 12
MISCELLANEOUS STANDARDS OF PERFORMANCE
RULE 13
FOUNDRY AND FORGING OPERATIONS

INDEX

REGULATION 12
MISCELLANEOUS STANDARDS OF PERFORMANCE
RULE 13
FOUNDRY AND FORGING OPERATIONS

12-13-100 GENERAL

12-13-101 Description: The purpose of this Rule is to require the development of and compliance with Emissions Minimization Plans (EMP) designed to minimize the fugitive emissions of particulate matter and the emissions odorous substances from foundries and forges operating within the District.

12-13-102 Applicability: This Rule is applicable to any person who owns or operates a District-permitted furnace or oven (pursuant to District Regulation 2: Permits, Rule 1: General Requirements) at a foundry or forge that processes at least one (1.0) tons of metal per rolling twelve month period.

12-13-103 Exemption, Metal or Alloy Purity and Small Facilities: Neither the Standards (Sections 12-13-301 et seq.) nor the Administrative Requirements (Sections 12-13-401 et seq.) apply to the following facilities:

103.1 Clean Metal or Alloy Purity Exemption: Facilities or furnaces that melt only clean aluminum scrap or a metal or alloy (other than lead, solder, or zinc scrap) that is demonstrated to have a content of no more than 0.004 percent of cadmium and no more than 0.002 percent of arsenic pursuant to Section 12-13-601;

103.2 Small Facilities Exemptions: Foundries or forges that melt or heat treat 2,500 tons or less of metal per rolling twelve month period.

12-13-200 DEFINITIONS

12-13-201 Alloy: A solid or molten mixture of two or more metals or of one or more metals and nonmetallic elements. Examples of alloys include steel, brass, and bronze.

12-13-202 Binder: A material consisting of resin, activator, or catalyst or a combination thereof, used to bind sand together in metal casting operations. Binders may include phenolic-based resins, urethanes, epoxy-acrylics, furfuryl alcohol, and sodium silicate.

12-13-203 Casting: The formation of metallic parts or casts by pouring molten metal into a mold and core assembly or into a mold for ingots, pigs, sows and cylinders.

12-13-204 Charging: The process of adding materials, such as metal, coke, flux, and charcoal to a furnace in preparation to heat and melt metal.

12-13-205 Cooling: The act of allowing cast metal to cool close to ambient temperatures while being contained in the mold.

12-13-206 Cupola: A vertical cylindrical shaft furnace to melt iron and steel by combustion of a charging material forced upward by heated air. Charge components may include coke, limestone and forms of iron and steel, such as scrap and foundry returns.

12-13-207 Die Casting: The process of injecting molten metal under high pressure into a steel mold, known as a die, to form metal parts.

12-13-208 Dross: The solid impurities floating on a molten metal composed primarily of impurities, metal, and metal oxides.

12-13-209 Finishing Operation: Operations that are performed once a cast metal part has been shaken out and cooled and that address imperfections and assembly in preparation of the final product for the customer. Finishing operations includes shot blasting, grinding, and welding.

12-13-210 Forge: Any facility at which forging operations are conducted.

12-13-211 Forging Operations: The act of creating metal products by heat treating and shaping metals. Forging operations include operation of an oven in which metal is heated until it is malleable, hardening, annealing, tempering stamping, pressing, extruding, hammering, and quenching.

12-13-212 Foundry: Any facility at which foundry operations are conducted.

12-13-213 Foundry Operations: The operation of a furnace in which scrap metal, ingots, and/or other forms of metal is charged, melted, and tapped; the casting of metal parts; the cooling and shake-out of the cast metal parts; mold and core making; finishing of the cast metal part; metal management and sand reclamation..

12-13-214 Fugitive Emissions: For the purpose of this Rule only, the emissions of particulate matter and odorous substances to the atmosphere from man-made sources that are not released through a system of equipment that is designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. Fugitive emissions include mold vent gases, equipment leaks, particulate emissions from metal handling and uncontrolled product finishing, and emissions that are released through windows, doors, vents, and other general building ventilation or exhaust systems.

12-13-215 Furnace: For the purposes of this Rule only, a device used to melt metal. Types of furnaces include, but are not limited to, cupola, electric arc, pot, induction, blast, crucible, sweat, and reverberatory furnaces.

12-13-216 Grinding: A machining process used to either shape components that are too hard to be machined by conventional methods, such as hardened tool steels and case or induction hardened components, or used to obtain a high degree of dimensional accuracy and surface finish on a component.

12-13-217 Metal: For the purposes of this Rule, metals include ferrous (iron-based) metals and alloys and non-ferrous (non-iron-based) metals and alloys. Examples of metals include iron, steel, and other iron-based alloys; aluminum, copper, brass, bronze, gold, silver, zinc, tin, lead, platinum, nickel, chromium, cadmium, manganese, mercury, tungsten, and titanium and their non-ferrous alloys.

12-13-218 Metal Management: The transport, receipt, collection, sorting, segregation, separation, compilation, and storage of metals, metal-containing materials and non-metallic materials at a foundry or forge.

12-13-219 Metal Throughput: The weight of metal, in tons, charged to a furnace and melted.

12-13-220 Minimization: The reduction to the smallest possible amount.

12-13-221 Mold and Core Making Operations: The formation of molds and/or cores from sand; binders; and other substances, such as clay, starch, charcoal, acrylics, phenols, and urethane to form mold assemblies to be used in the casting of metallic objects.

12-13-222 Odorous Substances: For the purposes of this rule only, odorous substances are phenols and phenolic compounds used in or emitted from mold and core making, casting, cooling, and shake out operations.

12-13-223 Oven: A device used to heat metal until it is malleable, but not to the point of

melting.

12-13-224 **Particulate Matter**: Any material that is emitted as liquid or solid particles or gaseous material which becomes liquid or solid particles that can remain suspended in the air, excluding uncombined water.

12-13-225 **Pouring and Casting Operations:** The act of transferring molten metal into a mold or mold assembly.

12-13-226 **Responsible Manager:** An employee, designated by the owner or operator of a foundry or forge with the authority to direct, operate, manage or control the facility's foundry or forging operations.

12-13-227 **Sand Reclamation:** The act of reducing lumps and removing foreign material and residual binder and/or carbonaceous, metallic and other contaminants from each sand grain from foundry sand used in mold assemblies.

12-13-228 **Scrap Metal:** Any metal or metal-containing material that has been discarded or removed from the use for which it was produced or manufactured and which is intended for reprocessing. "Scrap metal" does not include sprues, gates, risers, foundry or forge returns, and similar material intended for remelting that has been generated at the foundry or forge as a consequence of casting or forming processes but that has not been coated or surfaced with any material containing cadmium, arsenic, or nickel.

12-13-229 **Shake Out:** The separation of a metal casting from a mold assembly.

12-13-230 **Shot Blasting:** The act of impinging a metallic surface with shot such as sand, steel balls, or silicon carbide granules to texturize (smooth or roughen) or remove imperfections from a metallic surface.

12-13-231 **Slag:** A partially vitreous by-product of metal melting which contains impurities, including metallic oxides. Slag may be lighter than, and rest upon, the molten metal fraction in a furnace and may be poured off before the molten metal can be tapped.

12-13-232 **Tapping:** The pouring of molten metal from a furnace into ladles for transport to an area for casting.

12-13-233 **Welding**: The act of joining two pieces of metal together by the use of heat or pressure or both to produce a metal product. Types of welding including metal arc, atomic hydrogen, submerged arc, resistance butt, flash, spot, stitch, stud and projection.

12-13-300 STANDARDS

12-13-301 **Requirement to Comply with an Emissions Minimization Plan**:

301.1 Effective 90 days from the date that the Emissions Minimization Plan (EMP) is approved by the APCO pursuant to Section 12-13-405.5, the owner or operator of a foundry or forge shall operate the facility at all times in accordance with an approved EMP; or

301.2 Thirty days following the disapproval of the EMP by the APCO, the owner or operator of a foundry or forge shall be in violation of this section.

12-13-400 ADMINISTRATIVE REQUIREMENTS

12-13-401 **Emissions Minimization Plan Requirements:** The owner or operator of any foundry or forge subject to the requirements of this Rule shall develop an Emissions Minimization Plan (EMP) that details management practices, measures, equipment and procedures that are employed or are scheduled to be implemented to minimize

fugitive emissions of particulate matter (PM) and of odorous substances, as prescribed in Sections 12-13-402 and 403.

12-13-402 Operations Subject to the EMP: The EMP shall address all of the following operations that are conducted at the foundry or forge:

- **402.1** Mold and Core Making Operations;
- **402.2** Metal Management;
- **402.3** Furnace Operations, including tapping and pouring;
- **402.4** Forging Operations;
- **402.5** Casting and Cooling Operations;
- **402.6** Shake-Out Operations;
- **402.7** Finishing Operations;
- **402.8** Sand Reclamation;
- **402.9** Dross and Slag Management.

12-13-403 Contents of the EMP: The owner of operator of the foundry or forge subject to Section 12-13-401 shall prepare a complete and accurate EMP that details the management practices, measures, equipment and procedures that are employed or scheduled to be implemented to minimize fugitive emissions of particulate matter and odorous substances for the operations subject to the EMP:

403.1 Technical Data: The EMP shall include:

- **1.1** A detailed process flow diagram that clearly and accurately indicates all operations listed in Section 12-13-402 and the flows of materials used or produced in those operations at the facility, starting from the point of material receipt from offsite to the achievement of the final product. The process flow diagram shall identify the monitoring and the processes and controls that minimize particulate matter and odorous emissions, including, but not limited to baghouses, baghouse leak detectors, afterburners, carbon abatement, FID monitors, temperature and pressure monitors. All abatement and control devices shall be identified using either District Source Numbers according to their District Permit or as exempt from District permit requirements.
- **1.2** A facility layout/floor plan that clearly and accurately indicates the relative locations of all items identified in Section 12-13-403.1.1, including all equipment and permitted and exempt sources at a facility, all building walls, partitions, doors, windows, vents, and openings, and indicate all areas that have particulate or odor abatement, all metal melting and metal processing equipment, and any other source(s) that may contribute to particulate and/or odorous emissions. All metal melting and metal processing equipment shall be identified using either District Source Numbers according to their District Permit or as exempt from District permit requirements.
- **1.3** The name of the Responsible Manager and alternate responsible manager(s), if any, their schedule, and contact information.

403.2 Fugitive Emissions Reductions Previously Realized: A description of the equipment, processes and procedures installed or implemented within the last five years to reduce fugitive emissions.

403.3 Schedule for the Implementation of the EMP Elements: A list of each of the following:

- **3.1** The specific elements of the EMP that are in place as of the initial date of the submission of the EMP to the APCO for approval; and
- **3.2** The specific elements of the EMP that will be implemented following APCO approval of the EMP and the implementation schedule for each of those specific elements.

12-13-404 Compliance Schedule for the EMP: The owner or operator of a foundry or forge required to develop an EMP shall submit a complete and accurate EMP in accordance with the following schedule:

404.1 Submission: Submit the EMP to the APCO no later than [12 months following adoption of this Rule] or no later than 12 months following becoming subject to the requirements set forth in Section 12-13-401. The Responsible Manager shall certify the EMP as complete and accurate and sign it. The APCO may require the owner or operator to submit additional information to assure the completeness and accuracy of the EMP to ensure the minimization of fugitive emissions of particulate matter and odorous substances.

404.2 Completeness Determination: Within 30 days of receipt of the EMP, the APCO will notify the owner or operator in writing whether the EMP is complete. The EMP is complete if the APCO determines that it includes all of the information required by Sections 12-13-402 and 403. If the APCO determines that the proposed EMP is not complete, the notification will specify the basis for this determination and the required corrective action.

404.3 Corrective Action: Upon receipt of such notification, the owner or operator shall correct the deficiencies and resubmit the proposed EMP within 30 days. If the APCO determines that the owner or operator failed to correct any completeness deficiency identified in the notification, the APCO will reject the EMP as incomplete.

12-13-405 Review and Approval of the EMP: The procedures for determining whether each EMP meets the applicable requirements of this regulation are as follows:

405.1 Receipt and File Creation: Upon receipt of an EMP from a facility subject to the requirements of Sections 12-13-402 and 403, the APCO shall create a file that shall include the EMP as received, the results of the completeness determination, any comments received during the public comment period, and any recommendations made by the APCO.

405.2 Public Comment: The APCO shall make the complete EMP (with exception of facility-designated confidential information) available for public comment for 30 days. The APCO will collect and forward all public comments to the facility for consideration at the end of the 30-day comment period. At the APCO's discretion, the District may extend the comment period up to 90 days and/or may hold a public meeting to discuss the draft EMP during the comment period.

405.3 APCO Recommendations: Within 30 days of the close of the public comment period, the APCO shall review the draft EMP and the public comments and notify the owner or operator of the APCO's recommendations, if any, for additional processes and procedures to further reduce or prevent fugitive emissions from the foundry or forge, based on technical and economic feasibility, and made in consideration of worker health and safety.

405.4 Revision and Final Submission: Within 30 days of receipt of the APCO recommendations, the owner or operator shall:

4.1 Accept all of the APCO's recommendations and submit the EMP with the incorporated recommendations to the APCO and certified by the Responsible Manager; or

4.2 Specify the APCO recommendations that are accepted, and submit the EMP with the incorporated APCO recommendations to the APCO and provide a basis for the rejection of any the APCO's recommendations. The Responsible Manager shall certify the EMP.

405.5 Approval: With 30 days of the receipt of the final submission of the EMP, the APCO will review the EMP.

5.1 If the APCO determines that the EMP does not meet the requirements of Sections 12-13-402, 403, 405.3 and 405.4, the APCO will notify the

owner or operator in writing. The notification will specify the basis for this determination. Upon receipt of such notification, the owner or operator shall correct the identified deficiencies and resubmit the EMP to the APCO within 30 days. If the APCO determines that the owner or operator failed to correct any deficiency identified in the notification, the APCO will disapprove the EMP.

5.2 If the APCO determines that the EMP meets the requirements of Sections 12-13-402, 403, 405.3 and 405.4, the APCO will approve the EMP and shall provide written notification to the owner or operator. This period may be extended if necessary to comply with state law.

12-13-406 Designation of Confidential Information: With each submission of an EMP or any portions thereof or revisions thereto, the owner or operator of a foundry or forge subject to Section 12-13-401 shall designate as confidential any information claimed to be exempt from public disclosure as trade secrets or by other provisions of law. If a document is submitted that contains information designated confidential in accordance with this Section, the owner or operator shall provide a justification for this designation and shall submit a separate copy of the document marked as "public copy," with the information claimed to be confidential redacted.

12-13-407 Reporting Requirements for Planned Fugitive Emissions Reductions and Prevention Measures: The owner or operator of a foundry or forge subject to Section 12-13-401 shall report to the APCO no later than two years following the adoption of the Rule a description of the equipment and all feasible processes and procedures to be installed or implemented within the next five years to reduce or prevent fugitive emissions, with a schedule of implementation.

12-13-408 Reporting Requirements for Operation and Maintenance Plan Requirements Pursuant to the NESHAPs and District Regulation 11, Rule 15:

408.1 Metal Melting~~,~~ , Tapping and Mold and Core Making Operations: The owner or operator of the foundry subject to Section 12-13-301, shall report to the APCO within 90 days of the adoption of this Rule a list of the operations, processes, and equipment used to comply with the following provisions of federal NESHAP to which it is subject:

1.1 40 CFR Part 63, Subpart RRR: NESHAP for Secondary Aluminum Production, Section 63.1506(c)(1) through (c)(3) Capture/collection systems design, installation, and operation;

1.2 40 CFR Part 63, Subpart EEEEE: NESHAP for Major Source Iron and Steel Foundries, Section 63.7690(b)(1);

1.3 40 CFR Part 63, Subpart YYYYY: NESHAP for Area Sources: Electric Arc Furnace Steelmaking Facilities, Section 63.10686;

1.4 40 CFR Part 63, Subpart ZZZZZ: NESHAP for Iron and Steel Foundries Area Sources, Section 63.10895(b);

1.5 District Regulation 11: Hazardous Air Pollutants, Rule 15: Airborne Toxic Control Measure for Emissions of Metals from Non-Ferrous Metal Melting, Section 11-15 (b)(1) and (b)(3).

408.2 Operation and Maintenance Plan Requirements: The owner or operator of the foundry subject to Section 12-13-301 shall submit to the APCO a copy of the written Operation and Maintenance Plan or the Operation, Maintenance, and Monitoring Plan that was required by the US EPA Administrator pursuant to the following provisions set forth in the federal NESHAP to which it is subject within 90 days of the adoption of this Rule:

2.1 40 CFR Part 63, Subpart RRR: NESHAP for Secondary Aluminum Production, Section 63.1510(b);

2.2 40 CFR Part 63, Subpart EEEEE: NESHAP for Major Source Iron and Steel Foundries, Section 63.7710(b);

2.3 40 CFR Part 63, Subpart YYYYY: NESHAP for Area Sources: Electric Arc Furnace Steelmaking Facilities, Section 63.10685(a) and (b);

2.4 40 CFR Part 63, Subpart ZZZZZ: NESHAP for Iron and Steel Foundries Area Sources, Section 63.10896;

2.5 40 CFR Part 63, Subpart ZZZZZZ: NESHAP: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, Section 63.11550(a)(3).

12-13-409 Review of Alternative Binder Formulations: The owner or operator of any foundry subject to the requirements of this Rule that uses mold and core binders formulated with an odorous substance, including phenol and cresol, shall:

409.1 Investigate the availability and efficacy of alternative binders that produce fewer odorous emissions to ambient air than binders currently in use at the facility; and

409.2 Report the results of the investigation required pursuant to Section 12-13-409.1 to the APCO no later than two years following the adoption of the Rule and once before each two-year anniversary of the receipt of the initial reporting.

12-13-410 Five-Year Review of Emissions Minimization Plan: The owner or operator of a foundry or forge subject to the requirements of Section 12-13-401 shall update the APCO-approved EMP and submit the updated EMP to the APCO for review within 90 days of the five-year anniversary date of the approval of the original EMP and within 90 days of every five-year anniversary thereafter. Review and approval of the EMP will follow the schedule in Sections 12-13-402 and 403. The updated EMP must be certified by a Responsible Manager.

12-13-411 Review and Modification of Emissions Minimization Plan: Within 90 days of any of the following events:

411.1 The APCO determined that the owner or operator violated Section 12-13-301; or

411.2 The APCO determined that the owner or operator violated District, State or federal air quality regulations pertaining to emissions of PM or odorous substances; or

411.3 The owner or operator commenced a facility operation, process, equipment, or throughput change that required a modification of the Permit to Operate for that operation, process, equipment or throughput change;

the APCO may notify the owner or operator of a foundry or forge where the triggering event occurred, and that is subject to the requirements of Section 12-13-401, to review and submit a complete and accurate revised EMP to the APCO that updates the EMP to include the modified operation or source or to prevent a future violation of the EMP or applicable law or regulation specified herein, in accordance with schedule set forth in Section 12-13-404.

12-13-500 RECORDS AND MONITORING

12-13-501 Recordkeeping Requirements: The owner or operator of any foundry or forge subject to the requirements of this Rule shall maintain all records that are necessary to determine compliance with the requirements of Section 12-13-301 for a minimum of five years and make them available to the APCO or a designee of the APCO upon request including, but not limited to:

501.1 The monthly throughput of ferrous and non-ferrous metal processed, including metal melted, heated, scrapped, or recycled and the basis for each throughput determination;

501.2 The monthly throughput of each type of binder used;

501.3 The monthly throughput of sand used and the amount in pounds of sand used;

501.4 Documentation to demonstrate eligibility for exemption under Section 12-13-103.1. Documentation may include, but is not limited to:

4.1 Certification from the supplier demonstrating the chemical composition of the aluminum or other metal or alloy;

4.2 Demonstration of the chemical composition of the aluminum or other metal or alloy; as determined in accordance to Section 12-13-;

4.3 A method approved by the APCO.

12-13-600 MANUAL OF PROCEDURES

12-13-601 Methods for Determining Arsenic and Cadmium in Metals or Alloys: The eligibility for exemption under Section 12-13-103 shall be determined by the test methods listed in Regulation 11: Hazardous Pollutants, Rule 15: Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting, Section 11-15 (f)(4) through (7) or any other method approved by the APCO, the California Air Resources Board, the US EPA, or the American Society for Testing and Materials.

REGULATION 6
PARTICULATE MATTER
RULE 4
METAL RECYCLING AND SHREDDING OPERATIONS

INDEX

REGULATION 6
PARTICULATE MATTER
RULE 4
METAL RECYCLING AND SHREDDING OPERATIONS

6-4-100 GENERAL

6-4-101 Description: The purpose of this Rule is to require the development of and compliance with Emissions Minimization Plans (EMP) designed to minimize the fugitive emissions of particulate matter from metal recycling facilities operating within the District.

6-4-102 Applicability: This Rule is applicable to any person who owns or operates within the District a metal recycling facility with a metal throughput of 1000 tons or more per rolling twelve month period.

6-4-103 Exemption, Regulation 12, Rule 13: Emissions Minimization Plan: The requirements of Section 6-4-401 shall not apply to any person subject to the requirements of Regulation 12, Rule 13: Foundry and Forging Operations, Section 12-13-401, Emissions Minimization Plan Requirements, provided the provisions of Section 12-13-401 are met and the EMP includes the operations listed under Section 6-4-402.

6-4-104 Limited Exemption, Annual Metal Throughput: Neither the Standards (Sections 6-4-301 et seq.) nor the Administrative Requirements (Sections 6-4-401 et seq.) shall apply to any metal recycling facility:

104.1 That has a metal throughput of 50,000 tons or less per rolling twelve month period, or

104.2 That does not conduct shredder operations, or that does not produce, receive, or process ~~scrap~~ shredded metal ~~containing shredder residue~~.

6-4-200 DEFINITIONS

6-4-201 Depollution Operations: Depollution operations include the removal of lead batteries, polychlorinated biphenyl (PCB) capacitors; mercury switches; sodium azide canisters; refrigerants; free liquids, including gasoline, diesel fuel, radiator, wiper, brake and transmission fluids; and lead tire weights.

6-4-202 Fugitive Emissions: For the purpose of this Rule only, the emissions of particulate matter to the atmosphere that are not released through a system of equipment that is designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. Fugitive emissions include particulate emissions from metal management, shredding and segregation operation, wind-blown dust, and track-out.

6-4-203 Metal: For the purposes of this Rule, metals include ferrous (iron-based) metals and alloys and non-ferrous (non-iron-based) metals and alloys. Examples of metals include iron, steel, and other iron-based alloys; aluminum, copper, brass, bronze, gold, silver, zinc, tin, lead, platinum, nickel, chromium, cadmium, manganese, mercury, tungsten, and titanium and their alloys.

6-4-204 Metal Management: The transport, receipt, collection, sorting, segregation, separation, compilation, crushing, shredding, and storage of metals, metal-containing materials and non-metallic materials at a metal recycling and shredding facility.

6-4-205 **Metal Recycling Facility:** Any real property or structure that is used for the receipt, storage, segregation, or separation of scrap metal and mixed materials for reuse or resale.

6-4-206 **Metal Throughput:** The weight of metal, in tons, collected at a metal recycling facility.

6-4-207 **Minimization:** The reduction to the smallest possible amount.

6-4-208 **Particulate Matter**: Any material that is emitted as liquid or solid particles or gaseous material which becomes liquid or solid particles that can remain suspended in the air, excluding uncombined water.

6-4-209 **Responsible Manager:** An employee designated by the owner or operator of a facility to take actions required for compliance with this Rule on behalf of that facility.

~~**6-4-210** **Scrap Dryer / Delacquering Kiln / Decoating Kiln:** A unit used primarily to remove various organic contaminants such as oil, paint, lacquer, ink, plastic, and/or rubber from aluminum scrap (including used beverage containers) prior to melting.~~

6-4-2101 **Scrap Metal:** Any metal or metal-containing material that has been discarded or removed from the use for which it was produced or manufactured and which is intended for reprocessing.

6-4-2112 **Shredder Residue (SR)**: The material that remains after processing scrap~~ped items~~ metal, such as end-of-life vehicles ~~automobiles~~ and appliances~~, are shredded and is a mixture containing metal and non-metallic materials including,~~ Shredder residue includes, but is not limited to, plastics, vinyl, sponge, foam, leather, textiles, rubber and glass, and is also known as “fluff.”

6-4-2123 **Shredding Operation:** The cutting and crushing of cars and other metallic items into fist-sized metal chunks or smaller that are screened and subsequently separated by machinery that drives rotors that spin hammers.

6-4-300 STANDARDS

6-4-301 **Compliance with Emissions Minimization Plan**:

301.1 Effective 90 days from the date that the Emissions Minimization Plan (EMP) is approved by the APCO pursuant to Section 6-4-405.5, the owner or operator of a metal recycling facility shall operate the facility at all times in accordance with its approved EMP; or

301.2 Thirty days following the disapproval of the EMP by the APCO, the owner or operator of a metal recycling facility shall be in violation of this section.

6-4-400 ADMINISTRATIVE REQUIREMENTS

6-4-401 **Emissions Minimization Plan Requirements:** The owner or operator of any metal recycling facility subject to the requirements of this Rule shall develop and submit to the APCO in accordance with Sections 6-4-402 through 406 an Emissions Minimization Plan (EMP) that details management practices, measures, equipment and procedures that are employed or will be implemented to minimize fugitive emissions.

6-4-402 **Operations Subject to the EMP:** The EMP shall address fugitive emissions from all of the following operations that are conducted at and areas located at ~~the~~ metal recycling facility:

402.1 Roadways and other Trafficked Surfaces;

402.2 Metal Management:

402.3 Shredder Residue (SR) Management; and

402.4 Depollution Operations.

6-4-403 **Contents of the EMP:** The owner of operator of the metal recycling facility subject to Section 6-4-401 shall prepare a complete and accurate EMP that details the management practices, measures, equipment and procedures that are employed or are scheduled to be implemented to minimize fugitive emissions for all operations subject to the EMP:

403.1 **Technical Data:** The EMP shall include:

1.1 A detailed process flow diagram that clearly and accurately indicates all operations listed in Section 6-4-402 and the flows of materials used or produced in those operations at the facility, starting from the point of material receipt from offsite to the achievement of the final product. The process flow diagram shall identify the monitoring and the processes and controls that minimize fugitive emissions, including, but not limited to scrubbers, cyclones, baghouses, and baghouse leak detectors. All abatement and control devices shall be identified using either District Source Numbers according to their District Permit or as exempt from District permit requirements.

1.2 A facility layout/site plan that clearly and accurately indicates the relative locations of all items identified in Section 6-4-403.1.1, including all equipment and permitted and exempt sources at the facility, all building walls, partitions, doors, windows, vents, and openings, and indicate all areas that have particulate matter abatement, and any other source(s) that may contribute to particulate emissions. All metal recycling equipment shall be identified using either District Source Numbers according to their District Permit or as exempt from District permit requirements.

1.3 The name of the Responsible Manager and alternate responsible manager(s), if any, their schedule, and contact information.

403.2 **Fugitive Emissions Reductions Previously Realized**: A description of the equipment, processes and procedures installed or implemented within the last five years to reduce fugitive emissions.

403.3 **Scrap Acceptance Policy:** A copy of the facility's scrap acceptance policy outlining practices to prevent entraining into the metal management process those substances that are removed during depollution operations, such as free liquids, mercury switches, sodium azide canisters and polychlorinated biphenyl (PCB) capacitors.

403.4 **Schedule for the Implementation of the EMP Elements:** A listing of each of the following:

4.1 The specific elements of the EMP that are in place as of the initial date of the submission of the EMP to the APCO for approval; and

4.2 The specific elements of the EMP that will be implemented following APCO approval of the EMP and the implementation schedule for each of those specific elements.

6-4-404 **Compliance Schedule for the EMP:** The owner or operator of any metal recycling facility required to develop an EMP submit a complete and accurate EMP in accordance with the following schedule:

404.1 **Submission:** Submit the EMP to the APCO no later than [12 months following adoption of this Rule] or no later than no later than 12 months following becoming subject to the requirements set forth in Section 6-4-401. The Responsible Manager shall certify the EMP as complete and accurate and sign it. The APCO may require the owner or operator to submit additional information to assure the completeness and accuracy of the EMP to ensure the minimization of fugitive emissions of particulate matter.

404.2 **Completeness Determination:** Within 30 days of receipt of the EMP, the APCO will notify the owner or operator in writing whether the EMP is

complete. The EMP is complete if the APCO determines that it includes all of the information required by Sections 6-4-402 and 403. If the APCO determines that the proposed EMP is not complete, the notification will specify the basis for this determination and the required corrective action.

404.3 Corrective Action: Upon receipt of such notification, the owner or operator shall correct the deficiencies and resubmit the proposed EMP within 30 days. If the APCO determines that the owner or operator failed to correct any completeness deficiency identified in the notification, the APCO will reject the EMP as incomplete.

6-4-405 Review and Approval of the EMP: The procedures for determining whether each EMP meets the applicable requirements of this Rule are as follows:

405.1 Receipt and File Creation: Upon receipt of an EMP from a facility subject to the requirements of Section 6-4-401, the APCO shall create a file that shall include the EMP as received, the results of the completeness determination, any comments received during the public comment period, and any recommendations made by the APCO.

405.2 Public Comment: The APCO shall make the complete EMP (with exception of facility-designated confidential information) available for public comment for 30 days. The APCO will collect and forward all public comments to the facility for consideration at the end of the 30-day comment period. At the APCO's discretion, the District may extend the comment period up to 90 days and/or may hold a public meeting to discuss the draft EMP during the comment period.

405.3 APCO Recommendations: Within 30 days of the close of the public comment period, the APCO shall review the draft EMP and the public comments and notify the owner or operator of the APCO's recommendations, if any, for additional processes and procedures to further reduce or prevent fugitive emissions from the metal recycling facility, based on technical and economic feasibility, and made in consideration of worker health and safety.

405.4 Revision and Final Submission: Within 30 days of receipt of the APCO recommendations, the owner or operator shall:

4.1 Accept all of the APCO's recommendations and submit the EMP with the incorporated recommendations to the APCO and certified by the Responsible Manager; or

4.2 Specify the APCO recommendations that are accepted, and submit the EMP with the incorporated APCO recommendations to the APCO and provide a basis for the rejection of any the APCO's recommendations. The Responsible Manager shall certify the EMP.

405.5 Approval: With 30 days of the receipt of the final submission of the EMP, the APCO will review the EMP.

5.1 If the APCO determines that the EMP does not meet the requirements of Sections 6-4-402, 403, 405.3 and 405.4, the APCO will notify the owner or operator in writing. The notification will specify the basis for this determination. Upon receipt of such notification, the owner or operator shall correct the identified deficiencies and resubmit the EMP to the APCO within 30 days. If the APCO determines that the owner or operator failed to correct any deficiency identified in the notification, the APCO will disapprove the EMP.

5.2 If the APCO determines that the EMP meets the requirements of Section 6-4-402, 403, 405.3 and 405.4, the APCO will approve the EMP and shall provide written notification to the owner or operator. This period may be extended if necessary to comply with state law.

6-4-406 Designation of Confidential Information: With each submission of an EMP or any portions thereof or revisions thereto, the owner or operator of a metal recycling

facility subject to Section 6-4-401 shall designate as confidential any information claimed to be exempt from public disclosure as trade secrets or by other provisions of law. If a document is submitted that contains information designated confidential in accordance with this Section, the owner or operator shall provide a justification for this designation and shall submit a separate copy of the document marked as "public copy," with the information claimed to be confidential redacted.

6-4-407 **Reporting Requirements for Planned Fugitive Emissions Reductions and Prevention Measures:** The owner or operator of a metal recycling facility subject to Section 6-4-401 shall report to the APCO no later than two years following the adoption of the Rule a description of the equipment and all feasible processes and procedures to be installed or implemented within the next five years to reduce or prevent fugitive emissions, that are not a part of the EMP pursuant to Section 6-4-403.2 with a schedule of implementation.

6-4-408 **Five-Year Review of the EMP:** The owner or operator of a metal recycling facility subject to the requirements of Section 6-4-401 shall update the APCO-approved EMP and submit the updated EMP to the APCO for review within 90 days of the five-year anniversary date of the approval of the original EMP and within 90 days of every five-year anniversary thereafter. Review and approval of the EMP will follow the schedule in Sections 6-4-402 and 403. The updated EMP must be certified by a Responsible Manager.

6-4-409 **Review and Modification of the EMP:** Within 90 days of any of the following events:

409.1 The APCO determined that the owner or operator violated Section 6-4-301; or

409.2 The APCO determined that the owner or operator violated District, State or federal air quality regulations pertaining to emissions of PM; or

409.3 The owner or operator commenced a facility operation, process, equipment, or throughput change that required a modification of the Permit to Operate for that operation, process, equipment or throughput change;

the APCO may notify the owner or operator of a metal recycling facility where the triggering event occurred, and that is subject to the requirements of Section 6-4-401, to review and submit a complete and accurate revised EMP to the APCO that updates the EMP to include the modified operation or source or to prevent a future violation of the EMP or applicable law or regulation specified herein, in accordance with schedule set forth in Section 6-4-404.

6-4-500 **RECORDS AND MONITORING**

6-4-501 **Recordkeeping Requirements:** The owner or operator of any metal recycling facility subject to the requirements of this rule shall maintain all records that are necessary to determine compliance with the requirements of Sections 6-4-301 and 401 for a minimum of five years and make them available to the APCO or a designee of the APCO upon request. The records shall include the monthly throughput of each type of metal processed, including metal shredded or recycled and the basis for each throughput determination.

6-4-502 **Annual Scrap Metal Throughput:** The owner or operator of any metal recycling facility subject to the requirements of this rule shall maintain records of the annual throughput of scrap metal recycled on a twelve-month rolling average and of the basis for the throughput determination for a minimum of five years. The owner or operator shall make the records available to the APCO or a designee of the APCO upon request.

6-4-600 MANUAL OF PROCEDURES

REGULATION 2
PERMITS
RULE 1
GENERAL REQUIREMENTS

2-1-122 Exemption, Casting and Molding Equipment: The following equipment is exempt from the requirements of Sections 2-1-301 and 302, provided that the source does not require permitting pursuant to Section 2-1-319.

122.1 Molds used for the casting of metals.

122.2 Foundry sand mold and core forming equipment, including shell core and shell-mold manufacturing machines, to which no heat is applied, except processes utilizing organic binders yielding in excess of 0.25% free phenol by weight of sand.

~~**122.3** Shell core and shell-mold manufacturing machines~~.

122.43 Equipment used for extrusion, compression molding and injection molding of plastics. The use of mold release products or lubricants is not exempt unless the VOC content of these materials is less than or equal to 1 percent, by weight, or unless the total facility-wide uncontrolled VOC emissions from the use of these materials are less than 150 lb/yr.

122.54 Die casting machines.

(Adopted 10/19/83; Amended 7/17/91; 6/7/95; 5/17/00)

Bay Area Air Quality Management District

939 Ellis Street
San Francisco, California 94109

Staff Report

BAAQMD Regulation 12, Rule 13: Foundry and Forging Operations

BAAQMD Regulation 6, Rule 4: Metal Recycling and Shredding Operations

Amendments to Regulation 2, Rule 1: Permits, General Requirements

April 2013

Prepared By

Victor Douglas
Principal Air Quality Specialist

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ACKNOWLEDGEMENTS

District staff members who also greatly contributed to the development of this report and proposal:

Susan Adams, Assistant Counsel
Wayne Kino, Director of Compliance and Enforcement
Tracy Lee, Senior Air Quality Inspector
Noriko Lew, Supervising Air Quality Inspector
Jane Lundquist, Principal Air Quality Engineer
Charles McClure, Supervising Air Quality Engineer
Greg Solomon, Senior Air Quality Engineer
Kathleen Truesdell, Air Quality Engineer
Tim Underwood, Principal Air Quality Engineer.

STAFF REPORT
Regulations: Metal Melting and Recycling Operations

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I. EXECUTIVE SUMMARY

The staff of the Bay Area Air Quality Management District (District or BAAQMD) is presenting three regulatory proposals for the consideration of the District Board of Directors for adoption: proposed new Regulation 12: Miscellaneous Standards of Performance, Rule 13: Foundry and Forging Operations (Rule 12-13); proposed new Regulation 6: Particulate Matter, Rule 4: Metal Recycling and Shredding Operations (Rule 6-4); and proposed amendments to District Regulation 2; Permits, Rule 1: General Requirements (Rule 2-1).

Foundries, forges, and metal recycling and shredding operations are sources of emissions of particulate matter (PM) (including metals that are listed as toxic air contaminants) and other pollutants. Foundries can also be sources of odorous substances from casting operations. Staff has evaluated these industrial sectors and determined that generally these facilities comply with current District rules and regulations and that some facilities must also comply with federal rules that set emission limits for toxic compounds. However, some of these facilities also raise concern with respect to PM emissions, particularly when in close proximity to residential areas (with most facilities being located within or near Community Air Risk Evaluation (CARE) program designated areas).[i] The fraction of a facility's overall PM emissions due to fugitive sources can be significant. The District has also received public complaints of odors from some facilities.

During this regulatory process, staff concluded that the most effective way to reduce emissions of PM and odorous substances would be to focus on fugitive emissions that are not fully addressed by existing regulations. Staff also concluded that the best way to reduce those emissions is through the implementation of measures and procedures that are specific to the unique design and operation of each facility. This would be accomplished through the development of facility-specific plans aimed at minimizing the fugitive emissions of these pollutants. These plans, called Emissions Minimization Plans, would be developed by the facility; released for public comment; and subject to District review, recommendations, and approval; and in the future, periodically updated.

Fugitive emissions of PM from foundries (metal melting and casting), forges (heat treatment of metal), and of metal recycling including shredding operations; and fugitive emissions of odorous substances from foundry operations are most likely to impact nearby residents and businesses. Adoption of these two proposed new rules would reduce these emissions from implementation of the elements in each

[i] Under the Community Air Risk Evaluation (CARE) program, the District has identified six impacted communities in the Bay Area based on maps of toxic air emissions and sensitive populations, including Concord, eastern San Francisco, western Alameda County, Redwood City/East Palo Alto, Richmond/San Pablo, and San Jose. These six communities are deemed CARE areas.

plan. Each facility would propose the measures and procedures it would use to reduce these emissions and the District, after considering public comments on each plan, would make recommendations to the plan that consider the unique operation and configuration of each facility, the economic and technical feasibility of the recommended measures and any potential impacts to worker health and safety. Furthermore, the proposed rules would promote continuous improvement through periodic updates of the plans and through technology sharing inherent in the District review and approval of the plans. These proposals also avoid costly duplication of existing rules and standards by focusing on those fugitive emissions that are not already regulated or controlled.

Emissions of PM (both process emissions that are largely abated and fugitive emissions) from foundries and forges are estimated to be 102.1 tons per year (tpy).[ii] Of these, staff estimates fugitive emissions to be 57.3 tpy. Staff estimates that reductions of fugitive emissions due to the implementation of proposed Rule 12-13 would be about 5.7 tpy.

PM emissions from permitted equipment at metal recycling facilities are 5.7 tpy, but fugitive PM emissions are estimated to be considerably higher, 27.5 tpy (33.2 tpy total). Staff estimates that reductions of fugitive emissions due to the implementation of proposed Rule 6-4 would be 6.5 tpy.

Staff estimates the cost to develop and complete the review and approval of an Emissions Minimization Plan would range between $750 and $3000 if developed by facility personnel. The cost of implementation of the plans would vary and would be largely dependent on the equipment, measures and/or procedures each facility opted to include in their plans. Case studies indicate that the costs of implementation can vary between a one-time capital expenditure of $5000 to as much as almost $500,000 per year, annualized. However, because plans would be developed by each facility and the District would only make recommendations after assessing their economic feasibility, plan elements would be the most economical and effective options available to each facility. A socioeconomic analysis conducted for these proposals concluded that the proposals would result in:

- No anticipated employment impacts are due to implementation of these rules;
- No foreseeable regional indirect or induced impacts;
- No significant impacts to small businesses due to the flexibility of plan requirements.

[ii] Engineering analyses of two foundries indicate that fugitive emissions of PM ranged between 60 and 85 percent of the total (abated and fugitive) PM emissions. 60% has been used to estimate fugitive emissions from the remaining foundries subject to this rule. Emissions from permitted equipment are calculated from information reported to the District annually. The metal recycling facilities subject to this rule have few permitted equipment. The fugitive emissions from metal recycling facilities have been estimated from EPA emission factors used for similar processes.

Throughout the development of these proposals, staff has engaged in an extensive public consultation process. Staff has hosted numerous meetings, participated in many stakeholder-hosted meetings, held four workshops on the two initial draft proposals in June, 2011 and July 2012, and received and considered written comments from stakeholders.

Staff recommends the adoption of both new proposed District rules: Regulation 12, Rule 13: Foundry and Forging Operations and Regulation 6, Rule 4: Metal Recycling and Shredding Operations and proposed amendments to District Regulation 2, Rule 1: General Requirements, and adoption of a California Environmental Quality Act (CEQA) Negative Declaration for these new rules and amendments.

II. BACKGROUND

A. Source Description

This rulemaking addresses foundry and forging operations and metal recycling operations. Staff has identified approximately 20 facilities in the District that are considered foundries or forges. (Some of these facilities also contain metal recycling operations.) Foundries and forges process "ferrous" metals, "non-ferrous" metals or a combination of both. Ferrous metals and alloys are iron-based metals (have iron as the largest metal component). Non-ferrous metals and alloys are non-iron based metals and alloys, e.g.: aluminum (Al), copper (Cu), magnesium (Mg), zinc (Zn), brass, and bronze.[1]

Staff has identified over 100 facilities that conduct metal recycling operations and two facilities that conduct shredding of automobiles and other materials in the Bay Area. Metal recycling facilities collect, sort and recycle scrap metal collected from peddlers and scrap yards and other satellite facilities. Scrap metal includes ferrous metals (iron and steel products) and non-ferrous (mainly aluminum, copper, brass, and other metals). The scrap metal is often shredded and the various ferrous and non-ferrous metals are segregated from each other and from non-metallic materials.

B. Life Cycle of Metals

The facilities that would be regulated under the two proposals are integral components in the life cycle of metal products. There are four major phases in the metal life cycle:

1. Secondary Metal Production
2. Product Manufacture
3. Product Use / End Use
4. Collection, Recycling, and Refinement

1 Secondary Metal Production

Secondary metal production is unlike primary metal production or smelting, where metals are produced from ore. During secondary metal production, high grade metals and alloys are produced from refined scrap metals in a furnace. Secondary metal production occurs at foundries that operate a furnace to melt metals. Because secondary metal production typically uses recycled metals, production demands less energy than primary metal production and uses material that has been diverted from landfills and the landscape. Primary base metals can be used in the production of secondary metals when producing alloys or highly specified products, such as products with aerospace or military capabilities.

2 Product Manufacture

The next phase in the life cycle of metals is the product manufacturing stage. Here products are made from the metals produced at foundries and smelters. This includes the production of intermediary products such as sheet metal and ingots that are supplied to forges and other factories, such as automakers and appliance production facilities, to produce the items that are used by consumers and the construction industry.

3 Product Use / End Use

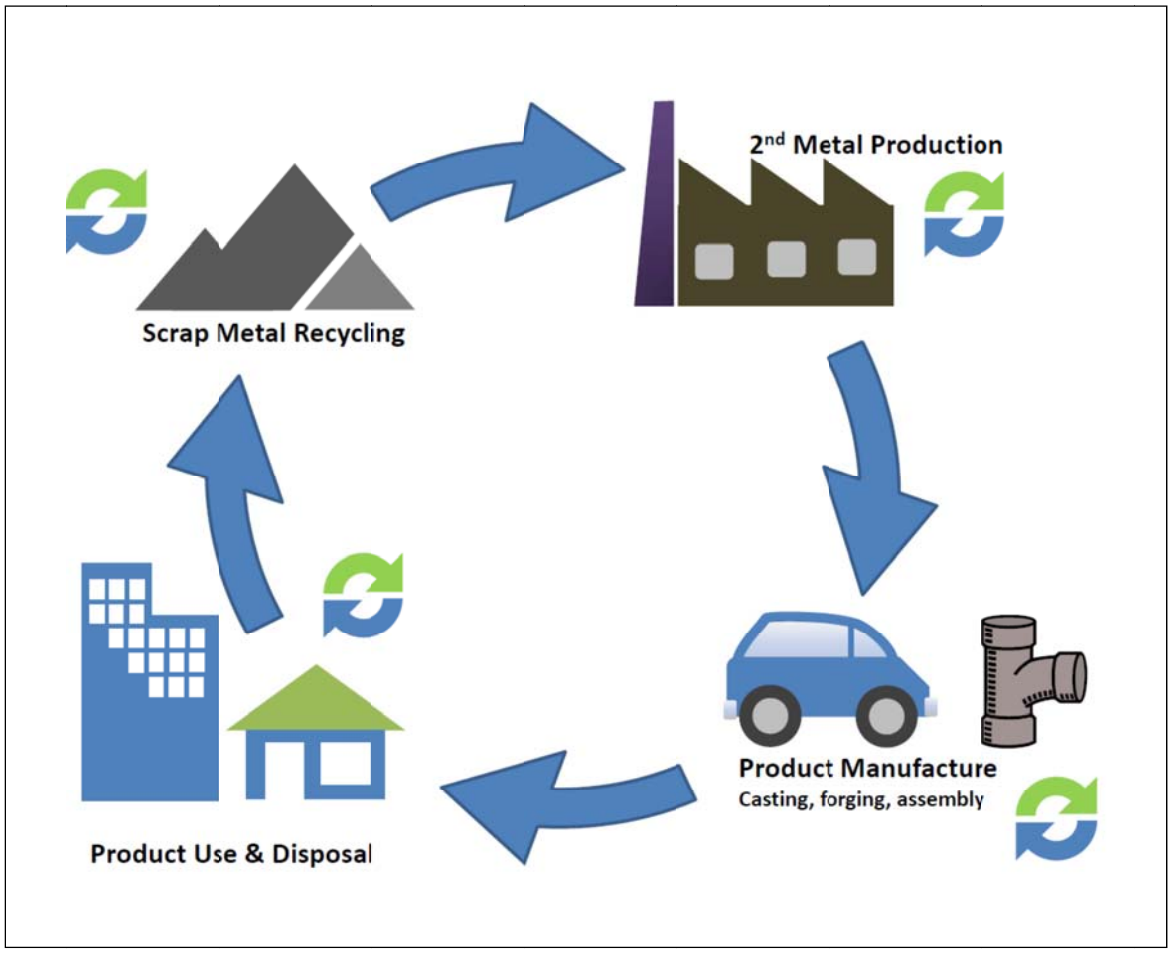
Most products made of metal have a finite lifespan, after which the product reaches its "end-of-life." The lifespan varies between products and within each type of product. Automobiles may last 10 to 20 years, while bridges and other engineering structures may last decades. The San Francisco Bay Bridge was completed in 1937. The eastern section of the Bay Bridge, which contains over one million tons of steel, was damaged during the 1989 Loma Prieta Earthquake and will soon be replaced by a new structure. The old super structure will be dismantled and scrapped.[2] Most metals contained in products in current use will be collected and recycled into new products by facilities subject to these proposed rules.

4 Collection, Recycling, and Refinement

The metals recycling industry annually diverts millions of tons of material that would otherwise be discarded in landfills. This results in both environmental and energy benefits as well as economic benefits. Because secondary metal production results in a reduction in the need for mining and smelting, less energy is used in the extraction and smelting of ore and less material is being added to landfills and littering the landscape. There is also an economic benefit. In 2010, 82 million tons of ferrous scrap and almost nine million tons of nonferrous scrap (aluminum, copper, lead, nickel, tin, zinc and others metals) were processed in

the United States.[3, 4] It is estimated that approximately 700,000 automobiles and an unknown number of appliances are recycled by shredders in California each year producing approximately 1.1 million tons of recyclable scrap metal and 300,000 tons of waste.[5] Metals from end-of-life products, or "obsolete metals," include automobiles, steel structures, household appliances, railroad tracks, ships, farm equipment and other sources. Metals generated from industrial and manufacturing sources are called prompt metals. Prompt metals account for half of the ferrous scrap metal supply. 3 Figure 1 illustrates the metal life cycle.

Figure 1
The Life Cycle of Metals



C. Equipment Descriptions

1. Foundries and Furnaces

Foundries are metal melting operations that cast molten metals into a wide array of products, such as pipes, connectors, valves, engine parts, pump housings, ski lift and cable car castings. Foundries melt metal in furnaces using coke, electricity, or natural gas. Once the molten metal has the right properties, it is

poured or “tapped” and transferred to molds in which the metal casting is formed into the shape of the final product. Foundries may operate one or more type(s) of furnaces, which include cupola, electric arc, reverberatory, sweat, and crucible.

Cupola Furnace

The cupola furnace is one of the oldest methods of making cast iron and is the most common furnace operating at iron and steel foundries for secondary steel production (steel made from scrap or ingots – not iron ore) in the District. A cupola is a cylindrical, water-cooled furnace that is lined with refractory brick made from heat resistant material such as aluminum oxide, magnesium oxide, silicon, or silicon carbide and is similar in appearance to a squat smoke stack. In the metal melting process, operators deposit layers of scrap iron or steel, coke and lime (used as flux) into the cupola near the top; this combination of materials is called the “charge.” Air, often preheated, is blown in to the bottom of the furnace through tuyeres (nozzles though which air blasts are routed into the furnace to provide oxygen) to improve the combustion and heating of the furnace.

Electric Arc Furnace

The electric arc furnace (EAF) is also used in secondary steel production. This furnace relies on electricity to heat and melt metal rather than a fuel such as coke or natural gas. The furnace is lined with refractory material and is usually water-cooled. The vessel is covered with a retractable roof through which typically three cylindrical, graphite electrodes descend into the furnace. When powered with a very strong electrical current, an electric arc forms between the charged metal and the electrode; the electrical arc that forms heats the metal to its melting point. Once the metal is molten and of the proper metallurgical properties, the electrodes are raised. The furnace is built on a tilting platform so that the liquid steel can be easily tapped. One facility in the Bay Area operates three EAFs.

Reverberatory Furnaces

The reverberatory furnace differs from a cupola furnace in that in a reverberatory furnace, the metal is isolated from contact with the fuel. Reverberatory furnaces rely on radiant and convective heating to melt the metal. These furnaces are not considered as energy-efficient as the cupola or electric arc furnaces. Reverberatory furnaces have historically been used for melting bronze, brass, and pig iron (an intermediate product of smelting iron ore with a high carbon content). In the Bay Area, these furnaces are used primarily for melting secondary aluminum, often from scrap.[6, 7]

The basic design of an aluminum reverberatory furnace is a simple steel box lined with refractory bricks with a flue at one end and a vertically-lifting door at the other. The temperature in the furnace allows the aluminum to melt while leaving solid other metals that have a higher melting point, such as iron. The floor of the furnace slopes slightly to separate the molten aluminum from the solid metals.[6]

Sweat Furnace

Sweat furnaces provides an effective and cost-effective means to separate non-ferrous metals, such as aluminum, from iron and/or steel. These units are also commonly known as dry hearth furnaces. Sweat furnaces heat, typically using natural gas, commingled recyclable metals to a temperature that causes the non-ferrous metals, such as aluminum, to melt and run off (i.e., "sweat") leaving behind steel and other materials that have a higher melting point .[8] The floor of the furnace is slightly inclined to allow the melted metal to flow and be directed to either a holding furnace or into molds.

Crucible Furnace

Crucible furnaces are one of the oldest and simplest types of melting unit used in the foundry. The furnaces use a refractory crucible which contains the metal charge. Crucibles and their covers are made of high temperature-resistant materials, usually porcelain, alumina or an inert metal. The charge is heated via conduction of heat through the walls of the crucible. The heating fuel is typically coke, oil, gas or electricity. Crucible melting is commonly used where small batches of low melting point alloy are required. The capital outlay of these furnaces makes them attractive to small non-ferrous foundries.

Crucible furnaces are typically classified according to the method of removing the metal from the crucible:

- Tilting furnace, in which the molten metal is transferred to the mold or ladle by mechanically tilting the crucible and furnace body.

- Lift-out furnace, in which the crucible and molten metal are removed from the furnace body for direct pouring into the mold.

- Bale-out furnace, in which the metal is ladled from the crucible to the mold.[9]

2. Forges and Ovens

Forges are metal processing operations where the metal is worked in the solid state. There are several types of forging: hot, warm, and cold. In hot forging, the metal is heated in a furnace above its recrystallization temperature – often to

glowing, but not to a molten state. Forging makes metal more malleable, which makes it more amenable to shaping, stamping, or forming. Warm forging occurs between 30 and 100 percent of the metal's recrystallization temperature (on an absolute scale) while cold forging occurs below 30 percent of the recrystallization temperature, usually at ambient temperatures. Historically, these types of metalworking were performed by a blacksmith. Currently, industrial forging is done either with presses or hammers powered by compressed air, electricity, hydraulics or steam. The furnaces used in the forging process are heated with natural gas or electricity.[10]

Associated with forging of metal is the quenching process, in which the hot metal is rapidly cooled in a liquid (such as water or oil) or air cooled. Quenching retards crystallization and preserves various qualities in the metal that would be lost during a slow cooling process.[10]

D. Operations Associated with Foundries

In addition to the equipment that heats and melts metals, several other operations are associated with foundries to produce the end products. These operations include temporary mold and core making, metal casting, cooling, shakeout and sand reclamation. These operations contribute to the emissions of particulate matter and odors. Once metal is heated to become molten in a furnace, it is cast, the process of pouring molten metal into molds to create products such as pipes, engines, tools, pumps, toys, and a myriad of other products. Metal casting requires the making of molds into which the molten metal is poured. These molds must withstand the extreme heat from the molten metal and maintain their shape without collapsing until the metal has cooled and solidified. Once solid and properly cooled, the part can be extracted from the mold. In sand casting, separation of the cooled cast part from the spent mold and core assembly is called shakeout. After the part is separated, the spent sand / binder mixture is sent through a sand reclamation process.

1. Temporary Mold and Core Making and Metal Casting

Temporary molds are made from mixtures of refractory (heat resistant) sand and some type of binder. (There are also molds for permanent casting: centrifugal casting (for casting of pipes), die casting, and ingot and sow casting.)

Sand Mold and Core Making

Sand casting is one of the earliest techniques used in metal casting due to the simplicity and availability of materials used. In sand mold making, disposable mold and core assemblies are produced with a mixture of sand and an organic or inorganic binder. A mold forms the shape that the cast part is to take and cores are used to form internal spaces within the mold. A binder is mixed with sand so the mold and core shapes do not disintegrate when they come into contact with

the molten metal. Organic binders, when vaporized by molten metal, can be the source of odor complaints about foundries. There are several general techniques used to produce molds and cores for sand casting: bake molding, no-bake and cold box molding, green sand molding, warm box molding, and hot box molding.

Bake Molding: With bake sand molding, a shell mold of the pattern is made by covering a heated metal pattern with a mixture of sand and a thermoset plastic binder, usually phenolic urethane. This action results in a thin layer of a sand and plastic mixture adhering to the pattern and some off-gassing of organic compounds also occurs. This skin of sand and plastic is removed from the pattern to form the "shell mold." The two halves of the shell mold are secured together in a flask – a container with only sides (no top or bottom) that forms a frame around the mold – and either a casting sand or green sand is poured around the outside of the shell to support it. Once the shell is secured, molten metal is poured in the shell to form the cast part. Contact with the hot molten metal results in vapor off-gassing. When the metal solidifies, the shell is broken and the molding materials recycled. This process can produce complex castings with good surface finish and excellent dimensional tolerance. A good surface finish and good size tolerance reduce the need for machining the part after casting. Shell molding offers better surface finish, better dimensional tolerances, and higher throughput due to reduced cycle times. The materials that can be used with this process include iron, and aluminum and copper alloys.[11]

No-Bake and Cold Box Molding: In the no bake and cold box techniques, sand is compacted around a master pattern – which is in the shape of the item to be cast – to form a mold cavity, which is sort of a negative of the master pattern and item to be cast. In order to obtain the desired properties for the binder, various solvents and additives are typically used with the reactive components of the binders to enhance the properties needed. This type of mold gets its name from not being baked in an oven like other sand mold types. Like bake casting, molds often form a two-part mold having a top and bottom that can be separated so that the master pattern can be removed.[1, 12, 13]

In the no-bake process, a liquid curing catalyst is mixed with the sand and binder before shaping the mixture in a pattern. This mixture is shaped by compacting it into a pattern and allowing it to cure until it is self-supporting.[12]

Cold box casting uses organic and inorganic binders that strengthen the mold by chemically adhering to the sand. In the cold-box process, a gaseous catalyst is permeated through a shaped mixture of the sand and binder. The gaseous catalyst cures the binder to form a hardened mold. The type of catalyst or co-reactant gas/vapor that is used depends upon the specific chemistry of the binder employed: epoxy-acrylic cold-box uses only sulfur dioxide. Urethane cold-box uses only tertiary amines; alkaline resole cold-box uses methyl formate or carbon dioxide; and sodium silicate cold-box uses carbon dioxide. This type of mold is

not baked in an oven like other sand mold types. Because these types of mold making processes use no phenolic binders and are not heated, there is a much lower chance of emissions of odorous substances.[1,12,14]

Green Sand Molding: The most common method for metal casting uses green sand molding, which is considered no-bake casting. Green sand is a mixture of refractory (heat resistant) sand, starch and/or seacoal (pulverized coal), and water. It is call "green" because of the moisture content of the mixture and not due to any coloration. The addition of the hot molten metal causes the starch or coal to partially combust which results in the off-gassing of organic vapors.[11,15,16]

Warm Box Molding: Warm box molding is a recently developed system that produces cores using a furfuryl alcohol-based binder that cures using a latent (heat activated) catalyst. The catalysts are acidic solutions of various salts. The resin, catalyst and release agent are mixed with the sand to form a sand mix with a long shelf life. When used, the mix is blown into a pattern heated to between 300 to 450 °F. The latent heat of the pattern rapidly accelerates the cures of the resin in the sand mix to form an insoluble, infusible solid. The mold remains in the box long enough to develop adequate strength to be handled and is then ejected. Curing continues as the mold cools.[17]

Hot Box Molding: Hot box molding is a heat-cured process that produces cores using sand, either a phenolic resin or furfuryl alcohol based binder, and a latent catalyst. Typically hot box mold and core assemblies require higher curing temperatures than a warm-box process. The sand with the binder is blown (using air pressure) into a heated core box that is at a temperature between 445 and 550°F.[1]

2. Cooling

Once a metal part has been cast, it must be allowed to cool before it can be removed from the mold. The duration of cooling is dependent on the size and shape of the cast part. Parts with a large surface area will cool faster than parts with a smaller surface area. During cooling, emissions of volatile organic compounds (VOC) including odorous substances and particulate matter may occur.

3. Shakeout

Once the cast metal part cools sufficiently it has to be removed from a sand mold. The process of removing the cast part is called "shakeout." With an efficient shakeout, the mold is broken up, the castings and sand are separated, and mold lumps are reduced in size by shaking the cast part. To accomplish this, most modern foundries use a vibratory or rotary shakeout system.[18]

Vibratory Shakeout System

Vibratory decks are commonly used to perform the shakeout operation. The vibrating deck consists of a heavy-duty steel frame and a perforated grid on the frame's top face. The frame is isolated by springs from the vibrating grid. The action of the vibrating deck imparts high frequency vibrations to the mold to break down compacted sand. The continuing vibration usually is enough to remove the remaining adhering sand from the casting. [18]

Rotary Drum Shakeout System

A rotary shakeout consists of two concentric drums. The outer unit is supported on rollers and may be gear- or chain-driven, typically at three to eight revolutions per minute. The inner drum is perforated to allow sand to flow into the space between the two drums. This allows the sand and castings to be delivered to fixed points for separation.[18]

4. Thermal Sand Reclamation

Many foundries that cast metal parts with sand molds and cores recycle or reclaim the sand for reuse. A well-operated sand reclamation system can achieve reclamation rates of well over 90 percent. The spent sand is heated to over 1350^{o}F in a fluid calcining bed to burn off the organic binding agent, before being cooled and pneumatically scrubbed to remove remaining clay, binder and metal fines. The exhaust from the reclaimer is usually routed to control devices, typically an afterburner and a baghouse. Reclamation greatly reduces waste and there is usually little to no loss of quality in the reclaimed sand. The reclaimed sand can be mixed with a binder and used for subsequent core or mold making.[19]

5. Permanent Mold Casting

There are three primary types of metal casting that use permanent molds: die casting, centrifugal casting, and gravity casting. Unlike sand casting, in which the mold is destroyed with each casting, permanent mold casts are used for multiple castings of the same product.[20]

Die Casting

Die casting is used to produce small to medium-sized castings at high production rates. Metal molds are coated with a mold release coating and preheated before molten metal is injected into it. Premeasured amounts of molten metal are forced from a shot chamber into the permanent mold or die under extreme pressure (1,450 to 30,500 pounds per square inch). This allows for high production rates.[21, 22]

Castings of varying weights and sizes can be produced. Nearly all die castings are produced from nonferrous alloys (aluminum, zinc and copper alloys), with limited amounts of cast iron and steel castings produced in special applications. The die casting process is suitable for a wide variety of applications for which high volume production is needed. Die casting provides excellent mechanical properties, surface finish, precise dimensional tolerances and can produce thin-section castings.[22]

Centrifugal Casting

In centrifugal casting, a permanent mold is rotated about its axis at high speeds (300 to 3000 revolutions per minute) as the molten metal is poured. The molten metal is centrifugally thrown towards the inner mold wall, where it solidifies while cooling. Typical materials that can be cast with this process are iron, steel, stainless steels, and alloys of aluminum, copper and nickel. Typical parts made by this process are pipes, boilers, pressure vessels, flywheels, cylinder liners and other parts that are symmetric around an axis.[23]

Ingot, Pigs and Sow Casting

Many foundry operations produce metals and alloys for raw materials in other metal melting operations. In these operations, the metal is usually made into ingots, pigs, or sows, which are masses of metal shaped for convenient transport and storage, such as in rectangular bars or blocks. The three terms, ingot, pig and sow, are often used interchangeably and the difference between them depends greatly on the context and the speaker. Ingots are typically the smallest of the three often weighing up to 20 pounds; pigs are usually larger than ingots and smaller than sows; and sows can weigh well over a ton. Ingots, pigs and sows are produced using the mold chill method. In mold chill, a permanent mold is cooled using a water spray or an internal cooling system. Once molten metal is poured into the mold it cools and contracts, which causes it to pull away from the surface of the mold. The molds are usually arranged in a continuous loop conveyor system that continuously fills the molds with molten metal and sprays them with water to cool after the ingots are ejected.

E. Metal Recycling and Shredding Operations

There are various scrap handlers and metal recycling operations in the Bay Area that range from a few tons throughput per year to thousands of tons of crushed or shredded metal per year, often with satellite feeder facilities. Sources of scrap metal are as varied as metallic products themselves; however, the majority of scrap metal comes from automobiles, demolitions (buildings, construction sites, even the Bay and Carquinez Straits Bridges), manufacturing, wiring, and miscellany (cans, appliances and other consumer products). The majority of metals recycled are steel and other ferrous metal alloys, aluminum, and copper

and copper alloys, such as brass and bronze, although precious metals are also recycled.

1. Receiving Scrap

Recycling businesses buy scrap metal from companies, public agencies and individuals. Upon arrival at the facility, the operator weighs the metal and sometimes scans it for radioactive materials. The load of scrap metal is inspected to minimize the presence of unacceptable substances such as wood, paper, dirt, rocks, glass and free liquids. Loads of scrap with more than residual amounts of these materials are not accepted. Other substances that may contaminate scrap metal include other metals, insulation, plastics, paints, and oils. Staff at these facilities is trained to recognize types of metals and alloys on sight. When there is doubt, the metal can be analyzed with hand-held spectrometers that provide accurate composition.

2. Depollution Process and Crushing

According to the California Metals Discards Act, vehicles and appliances must be depolluted before it can be further processed as scrap. Depollution involves the safe removal of “materials that require special handling” which include such materials as unspent sodium azide canisters; encapsulated polychlorinated biphenyls (PCBs) and metal encased capacitors; chlorofluorocarbon (CFC), hydrochlorofluorocarbon (HCFC) and other refrigerants from air-conditioning and refrigeration units; oil; mercury switches and temperature control devices; and other materials regulated as hazardous wastes. Facilities that conduct depollution activities must be certified by the California Department of Toxic Substances Control (DTSC). [24]

Once scrapped vehicles and appliances are properly depolluted, they are often crushed onsite in a large crusher to reduce their volume to make transportation easier. Crushers are basically large-scale compactors and can be of two types: "pancake," where scrap material (vehicle or appliance) is flattened by a descending hydraulically powered plate, or a baling type press, in which the scrap material is compressed from several directions into a large cube. Car crushers can be stationary or mobile.

3. Sizing and Sorting

Once the scrap has been inspected and depolluted it is sized and sorted. The sizing of the scrap is dependent on the facility, but metals are segregated by metal type, ferrous metal and alloys and non-ferrous metals and alloys. Ferrous metals can be separated from non-ferrous metals using magnets.

4. Auto and Metal Shredding

Only two recycling facilities in the Bay Area operate auto shredders. Once an end-of-life vehicle or appliance has gone through a depollution process, it is sent to a shredding and sorting operation which can be recycled in foundry processes. An auto shredder is a combination of a hammer mill – a machine that cuts and crushes cars, appliances, and other scrap metal – and screens to size the shredded materials into fist-sized scraps of metal. Water injection is used during the operation to minimize dust emissions and also to help reduce the potential for fires because the metals heat significantly due to friction and stress and the presence of residual organics. The shredding of automobiles results in a mixture of ferrous metal and non-ferrous metal, and shredder wastes. Once shredded, the ferrous metal is segregated magnetically from the mixture of non-ferrous metals and shredder waste also known as shredder residue or "fluff." This mixture can be further separated using air streams and screens to separate the lighter fluff from the heavier material containing metal.[25]

Scrap that has been properly sized and sorted is often sold and sent to foundries in the vicinity or shipped out of the Bay Area. At one Bay Area facility, aluminum scrap is charged to furnaces onsite to produce reclaimed metal that may be used as feed stock in other metal-melting processes.

5. Shredder Residue ("Fluff")

Shredder residue and scrap metal contaminated with shredder residue are of concern because shredder residue is a source of PM and can be contaminated with toxic metals (lead, mercury, arsenic) and other toxic compounds such as sodium azide and PCBs.[24, 25] Shredder residue or "fluff" is a by-product of scrap metal recycling and is generated at large-scale metal recycling facilities that operate shredders and hammermills.. Shredder residue can also be found at large-scale regional collection sites of scrap metals. Shredder residue is the material that remains after scrapped items, such as automobiles and appliances, are shredded. There are two Bay Area facilities that operate shedders and one that receives shredder residue. These facilities all collect scrap metals from others scrap yards as far away as Nevada and Arizona. Shredder residue compositions varies; but it is generally a mixture of plastic, vinyl, leather, cloth, sponge, foam, glass and other metallic material. In addition, trace amounts of lead, copper, cadmium, chromium, zinc, and mercury may be present, along with organic compounds, such as oil, antifreeze, transmission and brake fluids, and polychlorinated biphenyls (PCBs).[5, 25] Further, the scrap metal used as charge in the furnaces at many of the Bay Area's steel foundries most often contains some amount of shredder residue contamination.

F. Regulatory History

Metal melting and processing facilities in the Bay Area are subject to many air pollution control regulations, which largely depend on the types of metals processed and the pollutants emitted. Included in these regulations are District rules, a State airborne toxic control measure (ATCM), and at least five national emissions standards for hazardous air pollutants (NESHAP) promulgated by US Environmental Protection Agency (EPA).

1. District Regulations

The District currently regulates metal melting and processing facilities under the following rules:

- Regulation 1: General Provisions & Definitions;
- Regulation 2, Rule 1: General Requirements;
- Regulation 2, Rule 2: New Source Review;
- Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants;
- Regulation 2, Rule 6: Major Facility Review;
- Regulation 6, Rule 1: Particulate Matter General Requirements;
- Regulation 7: Odorous Substances; and
- Regulation 11, Rule 15: Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting.

Regulation 1: General Provisions and Definitions

The provisions and definitions in this regulation are applicable to all District Regulations and are in addition to the provisions and definitions in individual rules and regulations. Regulation 1 includes sections on nuisance, exclusions, breakdown procedures, definitions, right-of-access, sampling, and records maintenance.

Regulation 2, Rule 1: General Requirements

Regulation 2, Rule 1 includes criteria for issuance or denial of permits, exemptions, and appeals. Under the general requirements, any facility that operates equipment that causes or reduces air pollutants must have a permit to operate that provides details on how the equipment is to be operated and/or the levels to which the emissions are to be mitigated.

Regulation 2, Rule 2: New Source Review

Regulation 2, Rule 2 (Rule 2-2) applies to new or modified sources. Rule 2-2 contains requirements for Best Available Control Technology (BACT) and emission offsets. Rule 2-2 also implements federal New Source Review and Prevention of Significant Deterioration requirements. Any metal melting and processing facility that installs a new source or modifies an existing source of air

pollutants that emits ten pounds per day of any criteria pollutant must obtain permits under this rule and install District-approved BACT.

Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants

Regulation 2, Rule 5 requires preconstruction permit review for new and modified sources of toxic air contaminants; contains project health risk limits; and imposes requirements for Toxics Best Available Control Technology (TBACT). Any metal melting and processing facility that installs a new source or modifies an existing source of toxic air pollutants must install District-approved TBACT.

Regulation 2, Rule 6: Major Facility Review

Regulation 2, Rule 6 establishes procedures for large facilities to obtain federal Title V permits.[iii] This rule applies to any metal melting and processing facility that is major source or operates under a Synthetic Minor Operating Permit. A major source emits 100 tons per year of any regulated pollutant or 10 tons per year of any hazardous (toxic) pollutant or 25 tons per year of all toxic pollutants. A Synthetic Minor Operating Permit limits production to keep facilities from emitting pollutants at levels that would trigger Title V permit requirements.

Regulation 6, Rule 1: Particulate Matter General Requirements

Regulation 6, Rule 1 limits the quantity of particulate matter in the atmosphere by controlling emission rates, concentration, visible emissions and opacity.

Regulation 7: Odorous Substances.

Regulation 7 establishes general limitations on odorous substances based on complaints and specific emission limitations on certain odorous compounds. Compounds with specific emissions limits regulated under Regulation 7 include dimethylsulfide, ammonia, mercaptans, phenols, and trimethylamine.

Regulation 11, Rule 15: Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting

[iii] Title V operating permits are federally-enforceable permits issued by the District as required by the 1990 federal Clean Air Act amendments, and in accordance with District Regulation 2, Rule 6: Major Facility Review. Title V permits are required for "major facilities" that have the potential to emit regulated air pollutants or hazardous air pollutants above specific thresholds. Title V permits list every federally-enforceable air pollution requirement applicable at a major facility, including BAAQMD rules that have been incorporated into the state implementation plan (SIP) and include either a certification of compliance with these requirements or a schedule to comply. Title V permits must be renewed every five years, and renewals, as well as original permits, are subject to public notice requirements and EPA review.

Airborne Toxic Control Measures (ATCMs) are adopted by the California Air Resources Board (ARB) and are applicable throughout California. The Non-Ferrous Metal Melting ATCM applies to facilities that melt non-ferrous metals such as aluminum, copper, zinc, lead, cadmium, arsenic and their alloys.[iv] The ATCM limits emissions of PM and dust. The ATCM contains emission standards, equipment and operating requirements and specifications. All emission points equipped with an emission collection system must meet the specifications of the "Industrial Ventilation, Manual of Recommended Practices," 20th Edition, 1988. The District adopted the ATCM by reference as Regulation 11, Rule 15 on April 6, 1994.

Under this rule, any particulate matter control device must achieve a control effectiveness of at least 99 percent along with specific operating conditions. Further, the ATCM prohibits visible emissions that exceed an opacity limit of ten percent for three minutes or longer in any hour.

2. California Air Toxic "Hot Spots" Program

The District also implements the California Air Toxic "Hot Spots" Program (AB2588). This program identifies facilities that emit toxic air contaminants, prioritizes them, assesses the health risk, notifies local populations, and requires risk reduction.

3. Federal MACT Standards Affecting Foundries

Federal Maximum Achievable Control Technology (MACT) Standards are set by the EPA to control emissions of hazardous air pollutants (HAP). Hazardous air pollutants are 187 compounds that have been determined by the US EPA to be toxic. The following five MACT Standards affect 22 Bay Area facilities that hold District permits. These five regulations are:

- The National Emission Standard for Hazardous Air Pollutants (NESHAP) for Iron and Steel Foundries: 40 CFR Part 63, Subpart EEEEE (E5);
- NESHAP for Secondary Aluminum Production: 40 CFR Part 63, Subpart RRR (R3);
- NESHAP for Electric Arc Furnace Steelmaking Facilities: 40 CFR Part 63, Subpart YYYYY (Y5);
- NESHAP for Iron and Steel Foundries: 40 CFR Part 63, Subpart ZZZZZ (Z5); and
- NESHAP for Aluminum, Copper, and Other Nonferrous Foundries: 40 CFR Part 63, Subpart ZZZZZZ (Z6).

[iv] Although the ATCM regulates facilities that melt lead, cadmium, or arsenic, there are no such facilities in the Bay Area.

NESHAP for Iron and Steel Foundries, 40 CFR Part 63, Subpart EEEEE

The NESHAP for Iron and Steel Foundries (40 CFR Part 63, Subpart EEEEE (E5)) was originally promulgated in April 2004 and was amended in May 2005 and again in February 2008. It affects iron and steel foundries (NAICS Code numbers 331511, 331512, 331513) that are major sources of hazardous air pollutant (HAP) emissions. A major source is a facility with the potential to emit a total of ten tons per year of a single HAP or 25 tons per year of a combination of HAPs. E5 addresses emissions from metal melting furnaces, including EAF, electric induction furnaces, and cupola furnaces; scrap preheaters; pouring areas and stations; automated conveyor and pallet cooling lines; automated shakeout lines that use a sand mold system; and mold and core-making lines. This MACT standard also covers visible emissions from foundry sources and buildings. Two metal melting and processing facilities in the District are subject to this NESHAP, AB&I and US Pipe. Tables 1 and 2 present summaries of the main emission limits and standards contained in this NESHAP for both existing and new sources.[26]

Table 1
EEEEE Existing Iron and Steel Foundries

Source	Requirements / Standards
Electric arc furnace, Electric induction furnace Scrap preheater	0.005 grains of PM per dry standard cubic foot (gr/dscf), or 0.0004 gr/dscf of total metal HAP
Cupola furnace	0.006 gr/dscf of PM, or 0.10 pound of PM per ton (lb/ton) of metal charged, or 0.0005 gr/dscf of total metal HAP, or 0.008 lb of total metal HAP per ton of metal charged, AND 20 ppmv of volatile organic HAPs (VOHAP)
Pouring area /station	0.010 gr/dscf of PM, or 0.0008 gr/dscf of total metal HAP
Scrap preheater (in lieu of works practice standards – See below)	20 ppmv of VOHAP
Visible emissions	20 percent (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity

Table 2
EEEEE New Iron and Steel Foundries

Source	Requirements / Standards
Cupola furnace	0.002 gr/dscf of PM, or 0.0002 gr/dscf of total metal HAP, AND 20 ppmv of VOHAP
Electric arc furnace	0.002 gr/dscf of PM, or 0.0002 gr/dscf of total metal HAP
Electric induction furnace Scrap preheater	0.001 gr/dscf of PM, or 0.00008 gr/dscf of total metal HAP
Pouring area station	0.002 gr/dscf of PM, or 0.0002 gr/dscf of total metal HAP
Scrap preheater (in lieu of works practice standards – See below)	20 ppmv of VOHAP
Visible emissions	20 percent opacity (6-minute average), except for one 6-minute average per hour that does not exceed 27 percent opacity

Work Practice Standards of E5:

Metallic Scrap Management Program:

1. Restricted metallic scrap: E5 requires affected facilities to prepare and operate according to a written acceptance and use policy for the metal ingots, pig iron, slitter, or other materials that do not include recycle scrap metal from automotive body scrap, engine blocks, and oil filters, oily turnings, lead components, chlorinated plastics, or free liquids.
2. General iron and steel scrap: E5 also requires facilities to prepare and operate according to a written acceptance and use policy for iron and steel scrap metal that has been depleted (to the extent practicable) of organics and toxic metals in the charge materials used by the foundry.

Mercury Requirements:

1. Site-specific plan for mercury switches: E5 requires affected facilities to:
    i. Include a requirement in the scrap acceptance policy for removal of mercury switches from vehicle bodies used to make the scrap;
    ii. Prepare and operate according to a plan demonstrating how the facility will implement the scrap specification for removal of mercury switches.

NESHAP for Secondary Aluminum Production: 40 CFR Part 63, Subpart RRR (R3)

The NESHAP for Secondary Aluminum Production (40 CFR Part 63, Subpart RRR (R3)) was promulgated in March 2000 and was amended in December

2002 and again in December 2005. This MACT standard affects new and existing sources at secondary aluminum production facilities with the following NAICS Code numbers: 331312, 331314, 331315, 331316, 331319, 331521, and 331524. R3 regulates emissions of PM, total hydrocarbons (THC), and hydrochloric acid (HCl) from the following sources: aluminum scrap shredders, thermal chip dryers, scrap dryers, delacquering or decoating kilns, group 2 (i.e., processing clean charge only and no reactive fluxing) furnaces, sweat furnaces, dross-only furnaces, and rotary dross coolers. R3 also limits emissions of dioxin and furans (D/F) from thermal chip dryers, scrap dryers, delacquering /decorating kilns, and sweat furnaces; and from secondary aluminum processing units from area source[v] facilities. At least nine metal melting and processing facilities in the District are subject to this NESHAP, including CASS and a number of smaller facilities; ECS Refining, California Casting, Metech Recycling, Roto Metals, Tomra Pacific, J & B Enterprises, Kearney Pattern Works and Foundry, and Castco.

Table 3 presents summaries of the main emission limits and standards contained in R3. [27]

Table 3
RRR Secondary Aluminum Foundries

Source	Requirements / Standards
Sweat furnace	$3.5x10^{-10}$ gr of D/F toxic equivalents (TEQ) per dscf @ 11 percent O_2 (no opacity standard)
Dross-only furnace	0.30 lb of PM per ton of feed/charge 10% opacity from any PM add-on control device
Scrap dryer/delacquering kiln/decoating kiln (major source)	0.06 lb of THC, as propane, per ton of feed/charge 0.08 lb PM per ton of feed/charge 3.5×10^{-6} gr of D/F TEQ per ton of feed/charge 0.80 lb HCl per ton of feed/charge 10% opacity from any PM add-on control device
Scrap dryer/delacquering kiln/decoating kiln (Alt. limits if equipped with afterburner)	0.20 lb of THC, as propane, per ton of feed/charge 0.30 lb per ton of feed/charge 7.0×10^{-5}gr of D/F TEQ per ton of feed/charge 1.50 lb HCl per ton of feed/charge 10% opacity from any PM add-on control device
Aluminum scrap shredder	0.010 gr/dscf of PM 10% opacity from any PM add-on control device
Thermal chip dryer	0.80 lb of THC, as propane, per ton of feed/charge 3.5×10^{-5} gr of D/F TEQ per ton of feed/charge (no opacity standard)

[v] Area sources are defined by EPA as sources that emit less than 10 tons of a single hazardous air pollutant (HAP) or less than 25 tons of a combination of HAPs annually.

NESHAP for Electric Arc Furnace Steelmaking Facilities: 40 CFR Part 63, Subpart YYYYY

The NESHAP for Electric Arc Furnace Steelmaking Facilities: 40 CFR Part 63, Subpart YYYYY (Y5) was promulgated on December 28, 2007, and addresses emissions from area source steelmaking facilities using electric arc furnaces (EAF). PM emissions from charging, melting, and tapping operations must be collected and controlled. The Y5 requirements are additional to those of other NESHAPs that affect ferrous metal melting operations. This MACT standard has requirements for large and small facilities. Under this rule, a large facility is defined as having a production rate of at least 150,000 tons per year of stainless or specialty steel. A small facility produces less than 150,000 tons of steel annually. At least five metal melting and processing facilities in the District are subject to this NESHAP, including Pacific Steel Castings, Western Forge and Flange Company, Steve Zappetini & Son Inc, Stoltz Metals Inc, and Almaden Welding.

Table 4 presents summaries of the main emission limits and standards contained in Y5. [28]

Table 4
YYYYY Electric Arc Furnaces

Pollutant	Limits
PM	0.0052 gr/dscf (if less than 150,000 tons/yr: 0.8 lb/ton of steel or 0.0052 gr/dscf)
Visible emissions (VE)	6 percent opacity

NESHAP for Iron and Steel Foundries: 40 CFR Part 63, Subpart ZZZZZ

The NESHAP for Iron and Steel Foundries: 40 CFR Part 63, Subpart ZZZZZ (Z5) was promulgated January 2, 2008, and affects all area source iron and steel foundries. This MACT standard has requirements for large and small facilities that are non-major sources. There are different criteria defining large and small facilities, depending on whether the facility is new or existing. A large, existing facility is defined as one with a production rate of at least 20,000 tons per year of stainless or specialty steel. A small, existing facility produces less than 20,000 tons of steel annually. For new facilities, a large facility produces at least 10,000 tons annually and a small facility, less than 10,000 tons. This regulation affects at least three metal melting and processing facilities in the District, including PSC, PCC Structurals, and Ridge Foundry.

Table 5 presents summaries of the main emission limits and standards contained in Z5. [29]

Table 5
ZZZZZ Iron and Steel Foundries

Source	Limits
Furnace (Existing)	0.8 lb PM per ton or 0.06 lb of total metal HAP per ton of metal charged
Furnace (New)	0.1 lb PM per ton or 0.008 lb of total metal HAP per ton of metal charged
Visible emissions (VE)	20% opacity except for one 6-min avg/hour at 30%

NESHAP for Area Source Aluminum, Copper, and Other Nonferrous Foundries: 40 CFR Part 63, Subpart ZZZZZZ

The NESHAP for Area Source Aluminum, Copper, and Other Nonferrous Foundries: 40 CFR Part 63, Subpart ZZZZZZ (Z6) was promulgated on June 25, 2009 and addresses emissions of HAPs from area source aluminum, copper and other nonferrous foundries (NAICS Codes: 331524, 331525, and 331528). Under this MACT standard, an affected area source:

1. Emits less than 10 tons per year of a single HAP or less than 25 tons of any combination of HAPs;
2. Has an annual metal melt production of 600 tons or more; and
3. Uses material that contains, as appropriate:
    - o Aluminum foundry HAP: any material containing beryllium, cadmium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight or manganese greater than or equal to 1.0 percent by weight;
    - o Copper foundry HAP: any material containing lead or nickel in amounts greater than or equal to 0.1 percent by weight or containing manganese greater than or equal to 1.0 percent by weight; or
    - o Other nonferrous foundry HAP: any material containing chromium, lead, or nickel in amounts greater than or equal to 0.1 percent by weight.

At least two metal melting and processing facilities in the District are subject to this NESHAP: Kearney Pattern Works and Foundry, Inc. and Castco.

Table 6 presents summaries of the main emission limits and standards contained in Z6. [30]

Table 6
Non-ferrous Metal Foundries

Source	PM Limits
Existing large foundry	95% control efficiency or 0.015 gr/dscf
New large foundry	99% control efficiency or 0.010 gr/dscf

4. Federal Air Quality Regulations Affecting Metal Recyclers

Solvent Cleaning (degreasers), 40 CFR Part 63 Subpart T, The National Emission Standards for Hazardous Air Pollutants regulates Halogenated Solvent Cleaning. This applies to any halogenated solvent cleaning machine which uses solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, or chloroform, or any combination of these halogenated HAP solvents, in a total concentration greater than five percent by weight, as a cleaning or drying agent. Cleaning machines with a capacity of less than two gallons are exempt from the NESHAP. Auto recyclers sometimes use solvent degreasers to clean metal prior to resale.

Refrigerant Reclamation, 40 CFR Part 82 Subpart F addresses refrigerant recycling. This regulation requires that refrigerants be reclaimed before dismantling vehicles, refrigerants only be sold to certified dealers, and recovered refrigerants be properly labeled. This regulation does allow the use of the refrigerant in other cars owned by the dismantler. This regulation is based on Title VI of the 1990 Clean Air Act, Section 608.

5. Other Environmental Regulations Affecting Metal Recyclers

Metal recycling facilities are governed by several environmental regulations. These regulations include: the federal Resource Conservation and Recovery Act (RCRA) and the Metallic Discards Act (MDA), both enforced by DTSC via Certified Unified Program Agencies (CUPAs); and the National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements, enforced by the regional water quality control board, San Francisco Bay Area Region.

Federal Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) 42 U.S.C. §6901 et seq. gives the EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled EPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Metallic Discards Act

The Metallic Discards Act (MDA) is a California law that requires metal to be diverted from landfills for resource recovery and regulates any hazardous material released or removed from "metal discards" prior to crushing for transport or transferring to a baler or shredder for recycling.[24] Typical metallic discards include refrigerators, stoves, clothes washers and dryers, and air conditioners. The MDA has two main parts: (1) restrictions on disposal of metallic discards, and (2) requirement to remove materials that require special handling, which include items such as unspent sodium azide air bag canisters, encapsulated PCBs, refrigerants, used oil, and mercury switches. The MDA prohibits solid waste facilities such as landfills from accepting major appliances, vehicles, or other metallic discards, and prohibits their disposal on land or in mixed municipal solid waste. These restrictions do not apply to small amounts of metal that are economically infeasible to be separated from the waste stream.[31]

National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements

The National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements control water pollution by regulating point sources that discharge pollutants into surface waters of the United States. These regulations provide numeric effluent pollutant limits, numeric action levels, and technology and water quality-based effluent limitations for storm water and non-storm water discharges. Facilities required to obtain an NPDES permit include facilities that are listed under Standard Industrial Classification (SIC) Code 5093 (scrap and waste materials) and engaged in the following types of activities: (1) automotive wrecking for scrap-wholesale (this category does not include facilities engaged in automobile dismantling for the primary purpose of selling second hard parts, such as Pick-n-Pull); (2) iron and steel scrap- wholesale; (3) junk and scrap metal – wholesale; (4) metal waste and scrap- wholesale; and (5) non-ferrous metals scrap wholesale. Other types of facilities listed under SIC Code 5093 and engaged in wastes recycling, such as glass, paper, or plastic recyclers, are not covered under these requirements.

G. Emissions from Foundries, Forges, and Metal Recycling and Shredding Facilities

District staff has identified numerous metal melting and processing facilities in the Bay Area. There are at least 17 facilities that engage in metal melting and processing activities, such as metal melting and casting (foundries) and heat treatment of metals (forges). Additionally, there are more than 100 facilities that engage in scrap metal recycling, two of which are large-scale facilities that operate auto shredders and one large facility that handles shredded metal. All of these operations emit particulate matter, including metals; volatile organic

compounds (VOC) (which include odorous compounds such as phenols); and/or toxics compounds.

The casting of molten metals is the primary source of PM and odorous substances, such as phenolic compounds, at foundries. These emissions occur when the hot molten metals contact the molds and cores formulated with binders that contain phenols, urethane, furans or other organic compounds. Metal forges emit PM and may emit odors from heat and pressure applied to lubricating oils on the metals. Table 7 lists the most common stages of production at foundries and forges and the types of emissions associated with those stages.

Table 7
Metal Production and Recycling Stages, Description and Emissions

Process*	Description	Emissions
Shredding	Grinding and sizing of scrap metal from cars and appliances into fist-sized chunks or metal using a hammermill and screens.	PM, visible emissions (VE)
Metal Management	Compilation, collection, storage and sorting of metals for metal management and the handling of byproduct and wastes.	PM, VE
Charging	Preheating the furnace and adding metal, flux, fuel and other compounds to furnace	PM
Furnace / Oven Operations: Metal Melting	Heating until the metal mixture is molten and reaches the proper temperature and metallurgic properties.	PM, VOC, carbon monoxide, oxides of nitrogen, toxics
Tapping	Molten metal is poured from furnace into a ladle for transfer to the casting area.	PM
Casting / Pouring	The tapped metal is transferred to the casting area and poured into the molds to form castings.	PM, VOC
Cooling	The cast metal is allowed to cool to close to ambient temperatures. While cooling, the metal cast shrinks often pulling away from the mold.	PM, VOC
Shakeout	Removing the casting from the mold – which can often involve destruction of mold.	PM, VOC
Grinding / Finishing	Once the casting is removed from the mold, it may have to be finished by grinding excesses of metal.	PM
Mold / Core Making	Making the mold / core from sand and binders and other substances such as clay, starch, charcoal.	PM, VOC, toxics

* The listed metal melting processes – metal management through grinding / finishing – are sequential steps in the production of cast metal parts. Mold / core making, however, is an essential parallel process that is not specifically a sequential step in the production of cast metal parts.

Operations at metal recycling facilities result in the emissions of PM from metal collection, sorting and shredding operations. Shredder residue and shredded metal that may be contaminated with shredder residue are of concern because

shredded metal and shredder residue are sources of PM and can be contaminated with toxic metals (lead, mercury, arsenic) and other toxic compounds such as sodium azide and PCBs.[24, 25] This PM can become airborne, transported, and deposited off site.[32, 33, 34, 35]

H. Current Emissions Reduction Techniques

The methods used to reduce the emission of pollutants from any source or operation fall into three main categories: 1) emissions abatement from point sources, such as an exhaust stack from a furnace or engine, through the use of control equipment such as carbon adsorption systems or fabric filters; 2) fugitive emission reduction through enhanced capture techniques; and 3) pollution prevention practices, such as reformulations and the reuse or recycling of by-products of production.

As discussed earlier, foundries, forges, and recycling facilities operate under a regulatory umbrella that ensures point sources of PM and VOC emissions, such as furnaces, ovens, core- and mold-making apparatus, sand reclamation, and shredders / hammermills are abated with the appropriate control equipment – baghouses, cyclones, afterburners, and carbon adsorption. Because these point sources of air pollutants are subject to such a high degree of control – at minimum, 95 percent – the fraction of the overall remaining emissions (emissions after control) attributable to fugitives becomes significant. In two detailed analyses, the fraction of the overall emissions attributable to fugitive emissions at two foundries was found to range between 60 and 85 percent.[36, 37]

In addition, various other processes and emissions sources, such as tapping, pouring and casting, cooling, shakeout, metal management, sorting, separation, open spaces, and trackout while having some limits placed on their emissions, are not adequately controlled and are the primary sources of fugitive emissions. Although all these emissions sources are subject to at best, 20 percent opacity standards via federal or District regulation, these opacity standards are not adequate to ensure the minimization of these fugitive emissions.

All of the potentially affected facilities engage in some sort of pollution prevention practices that ultimately reduce the emissions of PM, toxic compounds, or odors. These practices include the reformulations of binders used in mold and cores making, minimization of contaminants, such as lead weights, mercury switches, PCB, and sodium azide canisters in either the metal charged to furnaces or scrap to be recycled. These practices have greatly reduce the amounts of contaminants in the metal process and recycling streams and, therefore, in the emissions from these facilities.

Staff has concluded that additional measures are needed to properly address fugitive emissions of both PM and odorous substances from foundries, forges

and, metal recycling operations. Focusing on these emissions would address the sources that are not fully covered under the current regulatory environment.

IV. PROPOSED RULES

The District is proposing two new rules that would address fugitive emissions of PM and odorous substances from foundry, forging, and metal recycling and shredding facilities in the Bay Area: Regulation 12, Rule 13: Foundry and Forging Operations (Rule 12-13) and Regulation 6, Rule 4: Metal Recycling and Shredding Operations (Rule 6-4). Both of these proposed rules would rely on the implementation of management procedures through the development of Emissions Minimization Plans (EMP) to minimize fugitive emissions. Staff has analyzed the District and federal rules that these facilities are subject to and the stringent emission limitations that affect the most significant of their emission sources. Due to the controls on these sources, staff believes that the best opportunity to reduce emissions from and complaints about these facilities is to address fugitive emissions of particulate matter and odorous substances. Fugitive emissions, emitted near ground level, are also the most likely to affect nearby populations. The reliance on the development of an EMP allows each facility to tailor its approach to reducing or minimizing emissions to the unique conditions and configuration of its affected operations. Development of an EMP also encourages innovation and challenges the industry to look for more efficient, cost-effective methods of emissions control, minimization and prevention. Further, requiring the development of and compliance with an EMP also allows an exchange of information through the public's review and comments, District's recommendations on the procedures contained in the received EMPs, and through discussions with affected industry directly or via industry associations.

Proposed Rule 12-13 would address fugitive emissions from several general processes of foundries and forges and their associated operations, including:

- Mold and core making;
- Furnace / oven (including tapping);
- Heat treatment of metals;
- Casting and cooling;
- Shakeout;
- Finishing;
- Sand reclamation;
- Dross and slag management; and
- Metal management.

Proposed Rule 6-4 would focus on reducing fugitive emissions from metal recycling facilities that compile, shred, and sort scrap metal for resale, including the following operations:

- Metal management,
- Shredding operations, including minimization of automotive shredder residue (ASR) or "fluff."

A. Proposed New Rule 12-13: Foundry and Forging Operations

Proposed Rule 12-13: Foundry and Forging Operations would affect metal melting and processing operations that occur at foundries and forges. The proposed rule primarily relies upon the development and implementation of an EMP at each affected facility that would include equipment, practices and procedures to minimize fugitive emissions of PM and odorous substances. The EMP would ensure that affected facilities employ the best means available to address fugitive emissions that are not adequately addressed by current regulations applicable to these facilities.

1. Applicability

Proposed Rule 12-13 would affect the facilities that either melt metals (foundries) or heat treat metals (forges). The rule would apply to facilities with foundry furnaces and forging ovens that require a District permit. Foundries or forges with an annual metal throughput (metal charged to a furnace or heated in an oven) of 2,500 tons or more would be subject to all of the requirements of the rule; those facilities with a throughput between one and 2,500 tons would only be required to keep records on their annual metal throughput. This applicability would address those facilities with the greatest potential for emissions of PM and odorous substances. Table 8 lists permitted foundries and forges, their 2010 reported annual metal throughput and the locations of the facilities relative to impacted Community Air Risk Evaluation (CARE) areas.

Table 8
Foundries and Forges 2010 Annual Metal Throughput and Proximity to a CARE Area[a]

Facility Name	City	CARE Area	Annual Metal Throughput (tons/yr)
USS-POSCO Industries	Pittsburg	no	1,028,974
United States Pipe & Foundry	Union City	no	56,700
A B & I Foundry	Oakland	yes	39,500
Pacific Steel Casting	Berkeley	yes	28,460
CASS	Oakland	yes	14,700
Metech Recycling	Gilroy	no	788
PCC Structurals	San Leandro	yes	668
Berkeley Forge & Tool	Berkeley	yes	305
Ridge Foundry	San Leandro	yes	252
Xstrata Copper	San Jose	no	182
Memry Corporation	Menlo Park	no	69
Aalba Dent	Fairfield	no	63
ECS Refining	Santa Clara	yes	28
California Casting	Richmond	yes	3
J & B Enterprises	Santa Clara	yes	1
Castco	San Leandro	yes	n/a[b]

a. This information presented in this table comes from facility-reported permit data.
b. The annual metal throughput was not reported for this facility.

2. Emission Limits

Proposed Rule 12-13 would contain no emissions limits. Emissions limits and work practice standards are already contained in Regulation 11: Hazardous Pollutants, Rule 15: Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting and the five applicable NESHAPs that affect metal melting operations, District Regulation 6 and the permit conditions assigned to each piece of equipment:

1. Subpart RRR—National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production.
2. Subpart EEEEE—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries.
3. Subpart YYYYY—National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities
4. Subpart ZZZZZ—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources.
5. Subpart ZZZZZZ—National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries.

Staff believes that the emissions limits contained in these various regulations and permits effectively address process emissions of PM at this time.

The District will seek delegation from the US EPA for the federal NESHAP regulations, so that the District would be the primary enforcing agency for these regulations. This would mean that once delegation is granted, the District would enforce the federal NESHAPs for all affected facilities, including those not subject to the requirements of proposed Rule 12-13. The facilities would submit plans, reports, monitoring and source test information to the District rather than to EPA.

3. Development and Implementation of the Emissions Minimization Plan

Proposed Rule 12-13 would require affected facilities to develop and submit to the District for approval an Emissions Minimization Plan (EMP) that would detail the practices that have been or will be implemented to minimize fugitive emissions from the following operations and materials:

1. Mold and core making;
2. Metal melting and tapping;
3. Heat treatment of metals;
4. Casting and cooling;
5. Shakeout;
6. Finishing;
7. Sand reclamation;
8. Dross and slag management; and
9. Metal management, including, scrap metal acceptance and handling (to minimize contaminants such as lead, mercury, PCBs, and plastics).

The purpose of the EMP would be to establish individualized programs for a facility to implement to minimize fugitive PM and odor emissions. Over time, facilities would be able to improve their practices and equipment to reduce fugitive emissions and the impacts on the surrounding communities. Proposed Rule 12-13 would require that affected facilities submit an EMP to the District within one year of the adoption of the rule or within six months of becoming subject to the rule.

4. Evaluation of the EMP

The receipt of the EMP is the first step in an overall dialogue between the District, affected facilities and the public. Within 30 days of receiving a draft EMP, the District would determine if the EMP is complete, i.e., whether it includes all required elements of the EMP. If the EMP is not complete, the District would notify the facility that the EMP is not complete and the basis of this determination. Upon receipt of notification of an incomplete EMP, the facility has 30 days to correct any deficiencies and resubmit the draft EMP. If the District determines that the deficiencies are not corrected, the District would disapprove the EMP. If the EMP is complete, the District would evaluate all plan elements and would make it available for 30 days for public comment with any confidential information, such as metal throughput, redacted. The District may extend the public comment period up to a total of 90 days and may also hold a public

meeting if it is requested. Within 30 days of the close of the public comment period, the District would consider the proposed plan and any comments submitted by the public and may make recommendations – based on technical and economic feasibility and taking into consideration worker health and safety practices – for further revisions to the EMP by the facility to reduce or prevent fugitive emissions.

5. Revision and Approval of the Final EMP

After receiving any District recommendations, the facility would have 30 days to resubmit a revised final EMP reflecting the recommended changes or (in the absence of incorporating the recommendations) an EMP accompanied by written reasons explaining why any specific recommendation was not incorporated into the EMP. Within 30 days of the receipt of the final EMP, the District would review the EMP and determine whether or not it meets the requirements of the Rule. If the District determines that the EMP provides adequate emissions minimization procedures for all affected operations, the District would approve the EMP. If the District determines that all elements were not included, or that the measures were insufficient to adequately minimize emissions, the District would notify the facility of its decision and the basis. The facility would have 30 days to correct the deficiencies in the EMP and resubmit it for approval. If the facility fails to correct the deficiencies, the District would disapprove the EMP, and the facility would be in violation of the Rule 30 days following the disapproval.

6. Reporting Requirements

Intended Emission Reduction Projects

In addition to submission of their EMPs, affected facilities would be required to report to the District equipment, processes or procedures they plan to install or implement within the next five years to reduce or prevent fugitive emissions along with a schedule of implementation. This report would be independent of the EMP and considered a forecast of efforts intended by the facility and may be subject to change by the facility. The planned future actions would not be enforceable; but would encourage facilities to think long term about capital and operational improvements to reduce fugitives.

Reporting Requirements for Emissions Capture/Collection Systems Required Under the NESHAPs or Non-Ferrous Metal Melting ATCM

Facilities subject to the Non-Ferrous Metal Melting ATCM or one of the four federal NESHAPs that require the installation of an emissions capture/collection system capable of meeting “accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists” would be required to report to the District which of the NESHAP and ATCM

provisions are applicable and the manner in which these requirements are met. The specific sections are:

- 40 CFR Part 63, Subpart RRR: NESHAP for Secondary Aluminum Production, Section 63.1506(c)(1) through (c)(3) Capture/collection systems design, installation, and operation;
- 40 CFR Part 63, Subpart EEEEE: NESHAP for Major Source Iron and Steel Foundries, Section 63.7690(b)(1);
- 40 CFR Part 63, Subpart YYYYY: NESHAP for Area Sources: Electric Arc Furnace Steelmaking Facilities, Section 63.10686;
- 40 CFR Part 63, Subpart ZZZZZ: NESHAP for Iron and Steel Foundries Area Sources, Section 63.10895(b);
- District Regulation 11: Hazardous Pollutants, Rule 15: Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting, Sections 11-15 (b)(1) and (b)(3).

Reporting Requirements for Operation and Maintenance Plans

The proposed rule also requires facilities subject to one of the five federal NESHAP that require the development of operation and maintenance (O&M) plans to submit a copy of those approved O&M plans to the District within six months of the adoption of the Rule. The specific sections are:

- 40 CFR Part 63, Subpart RRR: NESHAP for Secondary Aluminum Production, Section 63.1510(b);
- 40 CFR Part 63, Subpart EEEEE: NESHAP for Major Source Iron and Steel Foundries, Section 63.7710(b);
- 40 CFR Part 63, Subpart YYYYY: NESHAP for Area Sources: Electric Arc Furnace Steelmaking Facilities, Section 63.10685(a) and (b);
- 40 CFR Part 63, Subpart ZZZZZ: NESHAP for Iron and Steel Foundries Area Sources, Section 63.10896;
- 40 CFR Part 63, Subpart ZZZZZZ: NESHAP: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, Section 63.11550(a)(3).

Review of Alternative Binder Formulations

Affected facilities that use mold and core binders made with odorous substances, defined in the rule as phenol and phenolic compounds, would be required to investigate the availability and efficacy of alternative binders that produce fewer emissions of odorous substances than currently used at that facility. The facility would have to complete and report the results of this investigation to the District no later than two years after the adoption of the Rule and biennially thereafter.

7. Recordkeeping

The proposal would require all foundries and forges with an annual metal throughput of one ton or more to maintain records on the monthly throughput of

ferrous and non-ferrous metal processed. This includes metal melted, heated, or scrapped; the monthly throughputs of the type(s) of binder systems and sand used; and for those facilities that qualify for the clean aluminum exemption, the aluminum purity certification.

8. Pure Metal or Alloy Exemption

Facilities that only melt metals or alloys other than lead, solder, or zinc scrap that certifiably contain less than 0.004 percent cadmium and less than 0.002 percent arsenic would be exempt from the EMP development and all other requirements, except certain reporting requirements of the proposal. However, to retain this exemption, the facilities must maintain records certifying the purity of the metals or alloys melted. This exemption duplicates an exemption in the Non-Ferrous Metal Melting ATCM and District Rule 11-15.

B. Proposed New Rule 6-4: Metal Recycling and Shredding Operations

Proposed Rule 6-4: Metal Recycling and Shredding Operations would also rely upon the development and implementation an EMP that would include practices and procedures to minimize fugitive emissions of PM. However, proposed Rule 6-4 differs from proposed Rule 12-13 in that it applies specifically to scrap metal recycling and shredding operations and focuses on those operations and materials specific to this industry. Proposed Rule 6-4 does not contain a requirement to minimize odors because odors are not typically associated with normal operations at these types of facilities. Staff has reviewed complaints received about metal recycling facilities. The complaints typically stem from the use of a cutting torch on unusually large pieces of metal, or are associated with accidental fires; these are the types of events that the District's complaint process is designed to address.

1. Applicability

Proposed Rule 6-4 would apply to scrap metal recycling facilities that receive at least 1,000 tons of scrap metal per year. Metal recycling facilities with an annual metal throughput of 50,000 tons or more would be subject to the general requirements of the rule. This applicability level is based on the size of facilities (based on throughput) that produce, receive, or process shredded metal. Feeder facilities that supply the larger scrap recycling facilities, such as Pick-n-Pull, which receive, de-pollute, dismantle, crush, and/or bail automobiles, generally do not exceed 50,000 tons per year and do not handle shredded metal.[38] Those recycling facilities with an annual metal throughput between 1,000 and 50,000 tons would only be required to keep records of their annual metal throughput. Based on this applicability, the general requirements of proposed Rule 6-4 would currently apply to only three Bay Area metal recycling operations: Schnitzer Steel at the Port of Oakland and Sims Metals at the Port of Redwood City and at

the Port of Richmond. Two of these facilities operate large-scale shredders that size and sort scrap metal and the other is a large-scale metal recycling operation that receives shredded metal from facilities outside the Bay Area. Table 9 provides the affected metal recycling facilities, along with their locations, metal throughput and proximities to CARE Areas.

Table 9
Metal Recycling & Shredding Facilities 2010 Annual Throughput and Proximity to a CARE Area*

Facility Name	City	CARE Area	Annual Metal Throughput (tons)
Schnitzer Steel	Oakland	yes	529,000
Sims Metal Management	Redwood City	yes	374,000
Sims Metal Management	Richmond	yes	360,000

* This information presented in this table comes from facility-reported permit data on annual throughput and estimated emissions.

Staff has investigated small-scale metal recycling operations that do not shred or collect shredded scrap and has determined that these facilities are not likely to have shredded metal. These facilities may operate metal shears, crushers and/or bailers; however, because these operations do not shred metal or receive shredded metal, if routine depollution practices are employed, the potential for contamination is minimal. The depollution practices are addressed under the DTSC and the Regional Water Control Board regulations, which are enforced by the Certified Unified Program Agencies (CUPA).

2. Emission Limits

Like proposed Rule 12-13, proposed Rule 6-4 does not contain emission limits. There are no federal NESHAPs that apply specifically to this industry; there are two NESHAPs that may apply depending on the type of operations present at these facilities. These NESHAPs are the Subpart T—National Emission Standards for Halogenated Solvent Cleaning and the Subpart B—Servicing of Motor Vehicle Air Conditioners for refrigerants which are currently addressed in District Regulation 8, Rule 16: Solvent Cleaning Operations and Regulation 12, Rule 7: Motor Vehicle Air Conditioner Refrigerant, respectively. These rules would only apply to these facilities if they operate solvent cleaning apparatus using one of the six regulated chemicals or remove refrigerant from automobiles and refrigerators.

However, the shredding operations are currently subject to District Regulation 6, Rule 1: Particulate Matter, General Requirements, which imposes a 20 percent opacity standard on all sources of particulate. In addition, the shredder / hammermills at these facilities have a limit of 0.01 grains per dry standard cubic foot that address process PM emissions imposed by their Permits to Operate,

significantly more stringent than the 0.15 gr/dscf limitation in Rule 6-1.

3. Development and Implementation of Emissions Minimization Plans

Like proposed Rule 12-13, Section 6-4-401 of proposed Rule 6-4 would require affected facilities to develop and implement an EMP that would detail the practices and equipment that have been or will be implemented to minimize fugitive emissions from the following operations, areas, and materials:

1. Roadways and other trafficked areas;
2. Scrap metal, including:
    a. Handling and storage operations,
    b. Crushing operations,
    c. Sorting operations,
    d. Shredding / hammermill operations;
3. Receipt of scrap metal from providers;
4. Depollution operations.

4. Evaluation of the EMP

The receipt of the EMP is the first step in an overall dialogue between the District, affected facilities, and the public. Within 30 days of receiving a draft EMP, the District would determine if the EMP is complete, i.e., whether it includes all required elements of the EMP. If the EMP is not complete, the District would notify the facility that the EMP is not complete and the basis of this determination. Upon receipt of notification of an incomplete EMP, the facility would have 30 days to correct any deficiencies and resubmit the draft EMP. If the District determines that the deficiencies were not corrected, the District would disapprove the EMP. If the EMP is complete, the District would evaluate all plan elements and would make it available for 30 days for public comment with any confidential information, such as metal throughput, redacted. The District may extend the public comment period up to a total of 90 days and would consider holding a public meeting if it is requested. Within 30 days of the close of the public comment period, the District would consider the proposed plan and any comments submitted by the public and may make recommendations – based on technical and economic feasibility and taking into consideration worker health and safety practices – for further revisions to the EMP by the facility to reduce or prevent fugitive emissions.

5. Revision and Approval of the Final EMP

After receiving any District recommendations, the facility would have 30 days to resubmit a revised final EMP reflecting the recommended changes or (in the absence of incorporating the recommendations) an EMP accompanied by written reasons explaining why any specific recommendation was not incorporated into the EMP. Within 30 days of the receipt of the final EMP, the District would review the EMP and determine whether or not it meets the requirements of the Rule. If

the District determines that the EMP provides adequate emissions minimization procedures for all affected operations, the District would approve the EMP. If the District determines that all elements were not included, or that the measures were insufficient to adequately minimize emissions, the District would notify the facility of its decision and the basis. The facility would have 30 days to correct the deficiencies in the EMP and resubmit it for approval. If the facility fails to correct the deficiencies, the District would disapprove the EMP, and the facility would be in violation of the Rule 30 days following the disapproval.

6. Reporting: Intended Emission Reduction Projects

Along with the EMP, affected facilities would be required to report to the District any equipment, processes or procedures that would be installed or implemented within the next five years to reduce or prevent fugitive emissions along with a schedule of implementation. This report would be independent of the EMP and considered a forecast of efforts intended by the facility and may be subject to change.

7. Exemptions: Regulation 12, Rule 13: Emissions Minimization Plans:

Metal recycling facilities that would have to comply with the EMP requirements of Proposed Rule 12-13: Foundry and Forging Operations would not have to develop a separate EMP for the Metal Recycling and Shredding rule provided the requirements for an EMP under Rule 12-13, Section 401 and Rule 6-4, Section 401 are incorporated in the same EMP.

8. Limited Exemption: Low Throughput Recycling Facilities:

Metal recycling facilities with an annual metal throughput between 1,000 and 50,000 tons would not be required to develop and implement a District-approved EMP. These facilities, however, would be required to maintain records on their metal throughput and provide the basis for the throughput determination.

C. Amendments to Regulation 2: Permits, Rule 1: General Requirements - Permit Exemption for Mold Making Equipment

Staff also proposes to eliminate the permit exemption for heated shell core and shell mold manufacturing machines in District Regulation 2, Rule 1: General Requirements (Rule 2-1). Currently, shell core and shell mold manufacturing machines are exempt from permits under Rule 2-1, Section 122.3. Because some of these machines, specifically those using heat to produce the shell cores and molds, are sources of emissions of PM and odorous substances and would be regulated under proposed Rule 12-13, their exemption from permit requirements should be removed. The proposed amendments to Rule 2-1 would read as follows:

2-1-122 Exemption, Casting and Molding Equipment: The following equipment is exempt from the requirements of Sections 2-1-301 and 302, provided that the source does not require permitting pursuant to Section 2-1-319.

122.1 Molds used for the casting of metals.

122.2 Foundry sand mold and core forming equipment, including shell core and shell-mold manufacturing machines, to which no heat is applied, except processes utilizing organic binders yielding in excess of 0.25% free phenol by weight of sand.

~~**122.3 Shell core and shell-mold manufacturing machines**~~.

122.43 Equipment used for extrusion, compression molding and injection molding of plastics. The use of mold release products or lubricants is not exempt unless the VOC content of these materials is less than or equal to 1 percent, by weight, or unless the total facility-wide uncontrolled VOC emissions from the use of these materials are less than 150 lb/yr.

122.54 Die casting machines.

When a source becomes subject to permit requirements by a change in District rules, the operator of that source has 90 days to submit a permit application.

D. Overview of Affected Facilities

Based on the applicability of each of the proposed rules, the following eight facilities would have to develop, have approved, and implement Emissions Minimization Plans: AB&I Foundry, United States Pipe & Foundry, Custom Alloy & Scrap Sales, Inc., Pacific Steel Casting Company, USS-POSCO Industries, Schnitzer Steel Products Company, Sims Metal Management, Redwood City, and Sims Metal Management, Richmond. These eight facilities represent the foundries and forges with the largest metal throughput and the largest metal recyclers that either operate shredders or receive or process shredded metal.

1. AB&I Foundry, Oakland

AB&I Foundry is a secondary steel foundry that was established in 1906 as the American Brass and Iron Foundry and is located on eight acres in south-east

Oakland near the Coliseum complex, which is in a District-designated CARE Area. The facility operates a water-cooled cupola furnace and makes pipes, pipe fittings, and couplings; and custom castings from recycled steel scrap metal. The exhaust from the furnace is controlled using a combination of an afterburner (for VOCs) and a baghouse (for particulates). The facility also operates mold and core making, sand reclamation machines, and a hot asphalt dip tank for waterproofing pipes. The facility employs approximately 200 people. AB&I is regulated under several District rules, one federal air toxic regulation and by other environmental agencies.

2. United States Pipe & Foundry Company, LLC., Union City

United States Pipe & Foundry (US Pipe) is a secondary steel foundry that is part of a company with over a 100-year history. US Pipe began operating on 70 acres in Union City in 1951. The facility operates a water-cooled cupola furnace and produces ductile iron pipes and fittings. The exhaust from the furnace is controlled using a combination of an afterburner and a baghouse. The facility also operates mold and core making and sand reclamation machines, and a hot asphalt dip tank for water proofing pipes. The facility employs approximately 180 people. US Pipe is regulated under several District rules, one federal air toxic regulation and by other environmental agencies.

3. Custom Alloy & Scrap Sales, Inc., Oakland

Custom Alloy & Scrap Sales (CASS) is a combined secondary aluminum production and scrap metal recycling facility that was founded in 1970 and has several satellite plants located in Antioch, Los Angeles, and Dayton, Nevada. CASS is located in west Oakland on seven acres of property within a District-designated CARE Area.[39] The facility operates three aluminum furnaces: two reverberatory furnaces and a sweat furnace that produce aluminum ingots. The exhaust from these furnaces is controlled using an afterburner and baghouse combination. The facility also recycles scrap metal supplied by peddlers and aluminum dross – a by-product of the aluminum production. CASS employs 20 people and is regulated under several District rules, one federal air toxic regulation and by other environmental agencies.

4. Pacific Steel Casting Company, Berkeley

Pacific Steel Casting (PSC) is a secondary steel foundry that operates in a mixed industrial area in West Berkeley. There are three electric arc furnaces that produce steel castings made from recycled steel scrap metal used in oil and gas production, mining, construction, trucking, alternative energy and the military. The exhaust from the furnaces is controlled using a combination of baghouses and carbon adsorption units. The facility also operates mold and core making and sand reclamation machines. PSC employs approximately 530 people and occupies a total of five acres located in one of the District-designated CARE

Areas. PSC is regulated under several District rules, two federal air toxic regulations and by other environmental agencies.

5. USS-POSCO Industries, Pittsburg

USS-POSCO is a steel finishing plant owned and operated by USS-POSCO Industries (UPI), a joint venture company established by US Steel Corporation and POSCO of the Republic of Korea. UPI is located on 1072 acres in Pittsburg and manufactures cold rolled, galvanized and tin mill products from hot rolled steel.[40] There are 90 sources at USS-POSCO permitted by the District. UPI also produces scrap metal that is managed and recycled. UPI employs nearly 1,000 people and its processes are regulated by the District and other environmental agencies.

6. Schnitzer Steel Products Company, Oakland

Schnitzer Steel Products (Schnitzer) is a metal recycling and shredding facility located on 35 acres in Oakland at the Port and is located in one of the District-designated CARE Areas. Schnitzer collects, depollutes (appliances only), shreds, and segregates scrap metal. (Automobiles are depolluted prior to arrival.) Collected scrap metal is shredded in a hammermill, the exhaust from which is controlled using water injection, cyclones, and a scrubber, filter, and demister combination. Schnitzer employs 75 people and is regulated by the District and other environmental agencies.

7. Sims Metal Management, Redwood City

Sims Metal Management (Sims) is metal recycling and shredding facility located in Redwood City at the Port and is located in one of the District-designated CARE Areas. Sims, Redwood City collects, depollutes appliances (similar to Schnitzer, automobiles are depolluted prior to arriving at the facility), shreds, and segregates scrap metal. Collected scrap metal is shredded in a hammermill, the exhaust from which is controlled using water injection and dynamic cyclones and scrubber combination. Sims Redwood City employs 22 people and is regulated by the District and other environmental agencies.

8. Sims Metal Management, Richmond

Sims Metal Management (Sims) is metal recycling facility located on an 18-acre parcel in Richmond at the seaport and is located in one of the District-designated CARE Areas. Sims Richmond collects, crushes, depollutes, and segregates scrap metal. Collected scrap (mostly automobiles and appliances, but occasionally including shredded metal) is collected from a variety of sources, including other metal recycling facilities in the western United States. The Sims Richmond facility employs 37 people and is regulated by the District and other environmental agencies.

V. EMISSIONS AND EMISSIONS REDUCTIONS

This proposal would address fugitive emissions of particulate matter and odorous substances. The implementation of various federal, State, and District regulations has addressed emissions of pollutants from most point and some fugitive sources located at foundries and forges and metal recycling facilities. (Point sources include exhaust from identified equipment, such as furnaces, ovens, shredders, and core and mold making equipment.) However, the degree of control of fugitive sources varies. Because point sources are well controlled, fugitive emissions from the metal melting and processing operations comprise a significant portion of the overall emissions from these facilities. Because there are few point sources at metal recycling facilities, and they are well controlled, the fugitive emissions from these facilities are the vast majority of the total. Most fugitive emissions are released at ground level and have the potential to impact nearby residents. Modeling indicates that these ground level fugitive emissions may have a disproportionately greater impact on nearby receptors than stack emissions. It also follows that reductions in fugitive ground-level emissions would have a beneficial effect on associated risk relative to an equivalent reduction in stack emissions of the same pollutant. Because stack emissions are currently subject to a high degree of control, these rules are specifically aimed at reducing fugitive emissions that may not be sufficiently addressed.

A. Particulate Matter

Particulate matter (PM) is a mixture of suspended particles and liquid droplets. PM includes elements, such as carbon and metals; compounds, such as nitrates, organics and sulfates; and complex mixtures such as diesel exhaust and wood smoke. PM is a leading health concern. A large body of evidence suggests that exposure to PM, particularly fine PM, can cause a wide range of health effects, including aggravation of asthma and bronchitis, an increase in visits to the hospital with respiratory and cardio-vascular symptoms, and a contribution to heart attacks and deaths. The Bay Area is not in attainment of the California standards for either PM of 10 microns or less aerodynamic diameter (PM10) or PM of 2.5 microns or less aerodynamic diameter (PM2.5); or of the national 24-hour PM2.5 ambient air quality standard.

Most of the facilities proposed to be regulated are located in or near BAAQMD Community Air Risk Evaluation (CARE) communities. Reducing PM2.5 emissions in these communities will help improve health and air quality in these communities most affected by air pollution. Additionally, PM emissions from foundries, forges, and metal recycling operations may contain toxic metals, which would also be reduced by targeting fugitive emissions of PM.

Process emissions of PM at foundries and forges are subject to stringent controls. Source test results show that PM emissions range from 0.0005 to 0.078 grains per dry standard cubic feet from furnaces and other point sources. This level of

control of point sources is due to permit conditions based on current District, State, and federal regulations. Table 10 shows estimates of process and fugitive emissions for foundries and forges.

A District engineering analysis of PM emissions at Pacific Steel Casting indicated that fugitive emissions comprise about 65 percent of the facility's total emissions (fugitive and abated PM emissions).[41] A similar analysis of PM emissions at ABI conducted by Keramida Environmental, an engineering consulting firm, showed fugitive emissions to be 85 percent of the total emissions (fugitive and abated).[42] These percentages were used to estimate the fugitive emissions from these two facilities. For US Pipe, a conservative estimate of 60 percent fugitive emissions was used.

CASS has very low amounts of process emissions that are well abated. This is because CASS is unique among the five facilities subject to the proposal because it only melts aluminum, which has a much lower melting point than iron, in furnaces heated by natural gas. Also, CASS uses permanent molds for the molten aluminum rather than sand molds, the manufacture and use of which generates particulate emissions. The fugitive emissions estimate for CASS is derived from its metal scrap recycling, which includes aluminum and non-aluminum scrap.

USS POSCO generates PM from its various processes; but these processes generate little fugitive PM. USS POSCO does generate scrap, estimated to be approximately ten percent of its metal throughput, and this scrap is conveyed and stored on site for recycling off site. Fugitive emissions were estimated from the storage and transfer of this material. Table 10 provides the annual metal throughputs, process, fugitive, and total PM emissions for the five facilities that would be affected by proposed Rule 12-13.

Table 10
Foundries and Forges Estimated Annual Process, Fugitive and Total PM Emissions

Facility Name	Annual Metal Throughput (tons)	Annual Process Emissions (tons)	Annual Fugitive Emissions (tons)	Total Annual PM Emissions (tons)
USS-POSCO Industries	1,028,974	15.8	0.15	16.0
United States Pipe & Foundry	56,700	7.3	12.2	19.5
A B & I Foundry	39,500	0.8	4.3	5.0
Pacific Steel Casting*	28,460	20.9	38.8	59.7
CASS	14,700	0.01	1.9	1.9
	TOTALS	**44.8**	**57.3**	**102.1**

* On March 7, 2013, staff published an earlier version of this report stating that the process PM emissions from Pacific Steel Casting were 59.7 tons per year (tpy) and that the total PM emissions were 170.6 tpy. Although based on District information, this estimation was in error. Pacific Steel Casting's total PM emissions equal 59.7 tpy; the fraction of PM emissions

attributable to fugitive emissions remains 65 percent of the total emissions. Pacific Steel Casting is operating under a Synthetic Minor Operating Permit that limits emissions, including fugitive emissions, to levels that do not trigger federal Title V permit conditions.

Staff used an engineering analysis of fugitive PM emissions from a recent CEQA analysis conducted for a new facility in West Sacramento, California to estimate fugitive emissions from Bay Area scrap metal recycling facilities.[43] For each facility, existing control mechanisms were considered based on a comparison to the new facility, weighted by the relative throughput of metal scrap. Table 12 shows estimates of process and fugitive emissions for metal recycling facilities.

Table 11
Metal Recycling Facility Estimated Annual Process, Fugitive and Total PM Emissions

Facility Name	Annual Metal Throughput (tons)	Annual Process Emissions (tons)	Annual Fugitive Emissions (tons)	Total Annual PM Emissions (tons)
Schnitzer Steel	529,000	00.13	11.5	11.6
Sims, Redwood City	374,000	5.6	7.0	12.6
Sims, Richmond	360,000	n/a	9.0	9.0
	TOTALS	**5.7**	**27.5**	**33.2**

The requirement to develop an EMP is aimed at minimizing PM emissions. The proposal allows each facility to identify its practices for reducing fugitive emissions according to the needs and capabilities of their operations. Accordingly, an estimation of emission reductions due to the adoption of this proposal would be difficult to determine precisely. However, over time, the District may be able to make qualitative comparisons of the effectiveness of the practices that promote better capture or the minimization of fugitive emissions from those sources for which emissions factors are available. Understanding the various practices implemented at each facility will assist the District to better understand the benefits of such practices applied to similar operations and under different conditions.

The fugitive emissions for foundries and forges total 57.3 tons per year. EPA, in developing national rules for various industries, estimates that these kinds of plans (often referred to as Operations and Maintenance plans) reduce emissions by up to 20 percent. Staff estimates, because many potential measures have already been put into place, that implementation of proposed Regulation 12, Rule 13 could reduce emissions by at least 10 percent, or 5.7 tons per year.

Staff estimates the potential emission reductions from the implementation of proposed Regulation 6, Rule 4 from the three affected metal recyclers to be 20 percent or 6.5 tons per year. This is based on comparing the Bay Area metal recyclers with the highly controlled project planned for West Sacramento.

B. Odorous Substances

The typical complaints the District receives about foundries and forges concern odors, and most of the odors complaints come from the use of phenols and phenolic compounds in binders that are volatilized in the casting process. Phenol is discernible at a concentration of 0.011 parts per million (11 parts per billion).[44] So, fugitive emissions of these compounds have a high potential to generate complaints. The proposal would minimize the emissions of odorous substances by requiring the facilities to evaluate various methods currently employed to address fugitive emissions and evaluate additional and alternative means to further reduce these emissions. Further, where applicable, facilities must periodically research alternatives to binders formulated with phenols or other odorous substances. Although, currently, not all casting jobs can be performed using low phenolic binder, manufacturers are constantly developing and testing new formulations that may allow foundries to replace binders formulated with phenol. Such replacements could greatly reduce, if not eliminate, the emissions of phenolic compounds that contribute to odorous emissions.

C. Evaluation of Emission Reductions

Staff will evaluate emissions reductions by a number of means. Because EMPs will be individual to each facility and address fugitive emissions rather than easily-measured process emissions, evaluation will depend on observation, interaction with the community and monitoring techniques. EMPs, when approved, are in place for a five year period. After three years from the first approval, staff will work with affected facilities and solicit input on progress from the communities. Staff monitors complaints received about these facilities and has seen a reduction in complaints from the addition of new equipment and the interaction with facilities during this rule development process. Staff has conducted two air monitoring studies associated with these facilities, one in West Berkeley and one in Oakland. The information required in an EMP and the evaluation process will lead to a greater understanding of how to reduce emissions from these facilities and the vast amount of experience gained by the District inspection staff and permit engineers in analyzing these facilities will be of primary importance in tracking progress. Finally, District staff will continue to focus on emissions in CARE areas and will consider a variety of means to monitor and assess emissions from foundry, forges and metal recycling facilities.

VI. ECONOMIC IMPACTS

A. Introduction

This section discusses the estimated costs associated with the proposed rules. The California Health & Safety Code states, in part, that districts shall endeavor to achieve and maintain state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide by the earliest practicable date. In developing regulations to achieve this objective, districts shall consider the cost effectiveness of their air quality programs, rules, regulations, and enforcement practices in addition to other relevant factors, and shall strive to achieve the most efficient methods of air pollution control. However, priority shall be placed upon expeditious progress toward the goal of healthful air.

A number of unique factors come into play in the analysis of the cost of these proposed rules. Most facilities have already implemented many emissions minimization measures that have greatly reduced the impacts of fugitive emissions of both PM and odorous substances to the nearby communities. Therefore, many of the costs of minimization have already been incurred by the affected facilities. Also, because each facility is unique in its operations, configurations, throughput, products, location and proximity to nearby receptors, it would be beyond the scope of this report to fully analyze each facility to determine the extent to which additional emissions minimization measure are needed and the economic impacts of each of those measures. The operator of each facility will be required to evaluate its own operations and conditions to identify the best means to reduce fugitive emissions from their facility.

The proposed rules require metal processing and recycling facilities to develop the minimization measures they will implement to reduce fugitive emissions. It is expected that each facility, given the flexibility provided by the structure of the rules, will develop an emissions minimization plan that includes effective and economical minimization measures for each operation that is required to be addressed; thus ensuring continuous improvement at the least cost. The rules recognize that each facility, all of which are long-standing Bay Area operations, have already implemented a variety of measures to reduce fugitive emissions, and these efforts are to be reflected in the plans. The public review process will allow other facilities to consider and implement similar measures. The exact estimates of the costs of compliance presented below do not represent an expectation of costs facilities would incur, but they present a range of potential measures that could be considered and the costs of each.

B. Development of an Emissions Minimization Plan

The cost of developing an EMP is dependent on the number of processes and operations that an affected facility must address. For each of the applicable subject areas, a facility must conduct an evaluation to determine whether the

practices and equipment currently in place are adequate to ensure emissions minimization. Staff estimates that an evaluation of each affected operation would require two to four man-hours. This estimation includes:

- Identifying which operations would be subject to procedure development requirements;
- Determining the emissions minimization practices currently employed;
- Analyzing those practices to determine their efficacy in minimizing emissions; and
- Identifying and incorporating best practices for those subjects for which the current practice is inadequate.

The number of affected operations range between five and ten for each potentially affected facility. Using a value of $75 per hour for the cost (wages and benefits) of an environmental engineer,[45] the cost of developing an EMP would range between $750 and $3000 if done by facility personnel.

C. EMP Implementation

The exact cost of implementation of an EMP would be dependent on the unique operations, configurations, and measures used to address fugitive emissions of PM and odorous substances at each affected facility. However, at a minimum, the cost of implementing an EMP would depend on several parameters:

- Whether a candidate measure is currently being practiced and, if so, is it adequate to reduce emissions;
- The equipment needed to implement a new measure;
- Permitting cost (if necessary);
- The time required to properly train personnel in the new measure; and
- Any ongoing materials (such as energy, filters, or activated carbon) or additional labor needed to implement a new practice.

Following are case studies illustrating the potential cost of emission minimization options that may be employed to reduce fugitive emissions of PM or odorous substances.

Case Study 1: Minimization of Air Drafts for Metal Finishing Operations

One potential emissions minimization option to reduce fugitive emissions of both PM and odors is the construction of an enclosure to minimize air drafts. Staff has assumed that an enclosure 20 feet long, 10 feet wide and 10 feet tall would be the minimum needed to address metal finishing operations. It is also assumed that at least two walls of the enclosure would already exist.[vi] Therefore, the enclosure would require two panels (ten by ten feet; ten by 20 feet) with a ceiling (10 x 20 feet). An enclosure of this size would cost about $25,000 based on an

[vi] These are the approximate dimensions and conditions of the cooling areas for several of the metal melting facilities visited by District staff.

approximate cost of $50 per square foot of installed material.[46] Site-specific evaluations at each facility would be required to improve cost estimates associated with this proposal. This cost could be reduced if finishing operations were relocated to an area already protected from uncontrolled drafts.

Case Study 2: Upgrading PM_{10} Emissions Capture and Control Systems at a Foundry

One option to address fugitive emissions would be to upgrade the capacity of an existing emissions control system to handle both process and fugitive emissions. This effort would require increasing the capacity of the emission abatement device to control stack / exhaust emissions, and also the expected fugitive emissions from the process. One Bay Area foundry reported that the cost to transport and install a baghouse that was once operated at another foundry in the southeastern United States totaled $3.5 million. (The cost of this baghouse when it was originally purchased and installed was reported to be approximately $7 million.) The baghouse, which has a capacity of 68,000 dry standard cubic feet per minute (dscfm), replaced two existing baghouses with a combined capacity of 44,000 dscfm. The facility-estimated cost to dismantle the existing baghouses is $250,000. Based on US EPA cost estimates, the total annual direct and indirect operating expenses (labor, maintenance, replacement bags and parts, and utilities, etc.) would be approximately $915,000.

The capital cost of an emissions collection system is estimated to be approximately $355,000. Theoretically, the additional capacity of this baghouse (22,000 dscfm) could be used to minimize fugitive emissions from tapping, pouring and casting operations. If the capital and indirect operating costs of the baghouse were apportioned based on capacity (22,000 dscfm to 68,000 dscfm or 0.32), the apportioned costs of the utilization of the additional capacity would be $1.1 million (capital costs) and $267,000 (annual operating costs). Annualizing the apportioned capital costs of the additional baghouse capacity and the emissions collection system over ten years at an annual interest rate of five percent[vii] and combining the resultant value ($193,000) with the apportioned annual operating costs of $267,000 results in an overall annualized cost of $459,000.

Case Study 3: Shakers to Reduce Trackout onto Public Roadways

One metal recycling facility has installed a series of shakers to reduce trackout of mud, which may contain metal contaminants and fluff, in recycling facilities onto public streets and highways where it can be re-entrained. The shakers are three feet by 15 feet in size and are arrayed in series with two dedicated to the right

[vii] A five percent interest rate applied over a ten-year period results in a capital recovery factor of 0.1295.

side of the tires and two dedicated to the left. The cost of installation totaled $5,000.[47]

Case Study 4: Reducing Fugitive PM_{10} Emissions from Transfer Operations at a Metal Recycling Facility

The transfer of refined scrap metal from stockpiles to a ship via a conveyor system can result in visible and PM_{10} emissions, which can be especially high during a windy period. The primary sources of emissions are at the drop points and the conveyor during high winds. One method used to address these emissions is the installation of a combination of dust control options for the conveyor system, including a wind tunnel, cocooning the conveyor, belly pans with a water recycle mechanism, side walls screens that allow air to pass through but filter dust, and a super chute with an apron to shield material falling into the ship. The unit, capital, and total annualized costs for the equipment to mitigate these fugitive emissions from a conveyor system are listed in Table 12.

Table 12
Capital and Operational Costs for Conveyor System Dust Control

Mitigation Option	Unit Costs[48]	Capital Costs[viii]	Annualized Capital and Annual Operational Costs
Wind Tunnel (200 feet)	$270 / foot	$67,500	$8,741
Conveyor Cocoon (100 feet)	$500 / foot	$62,500	$8,094
Belly Pans w/ Water Recycle (100 feet)	$229 / foot	$28,625	$3,707
Side Wall Screens (100 feet)	$8 / foot	$1,000	$129
Super Chute with Apron (2 chutes at 5 & 20-foot drops)	$1,500 / foot	$46,875	$6,070
Material Cost (Water at 50 gpm @ 16 hr/wk)	$3.30 /100 ft^3 [49]	n/a	$11,011
Maintenance & Repair	n/a	n/a	$2,000
Labor (wage & benefit) @ 64 hrs/yr	$30 / hr		1,920
		TOTAL	**$41,672**

Case Study 5: Dust Control for Open Spaces and Stockpiles Using Industrial Misters

Open areas and stockpiles are potential sources of PM emissions at both metal production and recycling facilities. Water, one of the best dust control options, cannot be used at foundries to mitigate dust emissions from charged scrap

[viii] These values represent unit costs, plus tax, shipping and installation (an additional 25 percent of the unit costs).

metal. However, water is used extensively at metal recycling facilities to control dust and PM emissions.

One extremely effective method to control dust from open spaces and stockpiles is the use of industrial water misters, specifically devices with brand names, such as "Buffalo Turbines®" or "Dust Boss®." These devices atomize water under high pressure into aerosol droplets and spray the resulting mist over large areas to agglomerate airborne dust particles.[50] The specification sheet of these devices (a Dust Boss® DB-100) states that it could address an area up to 280,000 square feet (when using the 359° programming), 6.4 acres (ac).[ix] The following additional equipment and materials are needed to operate one Dust Boss® DB-100: 150 kiloWatt (kW) generator, minimum 28.2 gallon per minute (gpm) water pump, 100 feet of industrial water hose, 50,000 gallons per day of water. Table 13 presents the costs associated with purchase and installation of these industrial misters.

Table 13
Capital Costs for Industrial Misters

Equipment / Material	Cost per Unit	Total Cost per Unit[x]
Dust Boss® DB-60 w/ 359° programming	$29,900[51]	$35,880
359 degree programming	$3,800[51]	$4,560
Generator: 150 kW	$17,900[52]	$21,480
Water Pump: 30 gpm	$300[53]	$360
Water Hose: 100 feet	$725[54]	$870
	TOTAL	**$63,150**

The capital costs to provide dust control for 3.2 acres would total about $63,000. Amortizing this value over ten years at annual five percent interest rate results in an annualized cost of $8,118 per 3.2 acres or about $2,600 per acre. The capital cost to mitigate a five-acre area would require at least two DB-100s at an approximately annualized capital cost of $16,236.

Operating cost for the misters include the cost of fuel for generators, the cost of labor for operating and maintaining the units, and may include the cost of water if purchased and not recycled. For the purposes of this analysis, it is assumed that the misters would operate 24 hours a day, seven days per week for at least 75 percent of the year; the remaining 25 percent of the year natural precipitation would maintain moist surfaces during operations and windy conditions. It is estimated that a 150 kW diesel generator would require at least 9.3 gallons of diesel per hour. Cost estimates assume that for at least nine months each year, a facility would rely on precipitation and collected storm and recycled water (three months for precipitation only, six months for collected water; and for the

[ix] Considering prevailing diurnal wind patterns along the edges of the San Francisco Bay, staff used a conservative value of 140,000 or 180 degrees of effectiveness.

[x] These values represent unit prices, tax, shipping and installation.

remaining three months, the facility would purchase water from a local utility. East Bay Municipal Utility District charges $3.30 per 100 cubic feet of potable water and $2.94 per 100 ft^3 for non-potable water. A Dust Boss® DB-100 requires 50,000 gallons per day. To address the five-acre area, the two DB-100s would need to be supplied with 100,000 gallon of water per day for at least six months, half of which would potentially need to be purchased. This translates into 13,368 ft^3 per day, which for three months would total 1.2 million ft^3. This volume of water at the potable rate of $3.30 per 100 ft^3 equals $40,250. Table 14 presents the annual operating costs for high-powered misters.

Table 14
Annual Operating Costs for High-Powered Misters

Equipment / Material	Cost per Unit	Annual Operating Costs
Diesel Fuel for 150 kW Generator (9.3 gph)	$4.00 per gallon	$491,000
Water (50,000 gallons / day)	$3.30 per 100 ft^3 [49]	$40,250
Labor at 80 hours per year mister	$30 per man-hour	$4,800
Misc. (repair and maintenance parts, insurance)	n/a	$3,000
	TOTAL	**$539,050**

The total annual cost of mitigating dust and particulate emissions from five acres of scrap metal is the sum of the annualized capital cost ($16,236) and annual operational cost ($539,050), or about $540,000.

Case Study 6: Installation of Screened Fences as Wind Barriers

Screen fencing is an effective means to passively reduce fugitive dust emissions from open unpaved areas. A modest reduction of wind speed from these barriers can result in major reduction of fugitive dust emissions. The material and installation costs per foot for screened fences 22 and 35 feet high are $350 and $370 respectively.[55] To enclose a square ten-acre parcel with a 22-foot high screened fence would cost $940,000; a 35-foot high fence would be twice that amount at $1.8 million.[xi] The annualized cost of the installation of these fences would be $120,000 and $240,000, respectively.[xii]

Case Study 7: Switching to Lower VOC Binder Formulation

One of the most effective means to reduce the emissions of odorous substances is to reduce or eliminate the use of odorous substances in the formulations of binders used in mold and core making operations. A reduction such as this

[xi] The disproportionate difference between the costs of a 22-foot fence and a 35-foot fence is due to the additional strengthening required to support the extra height, weight, and torque due to winds to which the taller fence would be subject.

[xii] A five-percent annual interest rate applied over a ten-year period results in a cost-recovery factor of 0.1295.

would translate into reductions in the emissions of odorous substances in both the mold and core making operations, as well as the casting, cooling, and shakeout processes. One Bay Area facility was able to switch from a Pepset® two-part binder system to a Techniset® two-part binder system. The cost, VOC concentration, potential emissions and emission reduction comparison for the two systems are presented in Table 15.

Table 15
Comparison of Costs and VOC concentrations and Potential Emissions for Two Binder Systems

	Pepset®	Techniset®
Cost[56]	$2.76/lb	$2.75/lb
Average VOC Concentration[56]	219 ppm	78 ppm
Potential VOC Emissions*	26.1 tpy	9.3 tpy
Potential VOC Emissions Reductions*		**16.8 tpy**

* These emission values are hypothetical and based on an air flow rate of 50,000 cfm and operating four hours per day, five days per week, for 52 weeks per year.

There is no essential cost difference between the two binder systems. Tests using a photoionization detector indicated that the Techniset system achieved a 64 percent reduction in VOC emissions over the Pepset system with no reduction in performance. This facility was able to switch to a lower VOC-emitting binder with no reduction in performance and no increase in operation cost with a reduction in VOC (including odorous substances) emissions.

The case studies indicate that there exists a broad range of emissions minimization options available and that those options come with a broad range of costs. While these case studies were presented to illustrate these variations (nature and costs), it should not be assumed that the District would require any of these options be included in any EMP. These options were presented for illustrative purposes only.

D. Review of Alternative Binder Formulations

There are only three facilities that would be affected by Section 12-13-409 of the proposed foundry and forging operations rule, the requirement to evaluate and report on alternative binder formulations: AB&I, PSC, and US Pipe. Each of these facilities has mold- and core-making operations that use foundry sands formulated with phenolic compounds. To comply with this requirement, affected facilities would need to:

- Identify the operations where odorous substances are used or can be emitted, such as mold- and core-making, casting, cooling, shakeout and sand reclamation operations;

- Consult with binder formulators to determine if there are any low- or non-phenolic binders available that may reduce the emissions of odorous substances relative to the current formulations in use at the facility;
- Evaluate the available binder formulations to determine if any are suitable for the facility's affected operations. This may include:
    - Working with the binder manufacturers to determine if there are like facilities that use alternative binder formulations;
    - Reviewing casting properties, weight, shape, size, whether the casting is bulky or intricate;
    - Comparing binder properties under various conditions, such as tensile strength under ambient and "hot" conditions;
    - Seeking approval of alternative processes from clients;
    - Developing pilot programs that would help evaluate the efficacy of various alternative binders formulations;
    - Determining how affected operations would have to change to accommodate alternative binders, such sand reclamation rates and spent sand disposal requirements.

Usually, the facility does not incur a direct cost for these evaluations; the binder manufacturer would normally underwrite the cost of the evaluation, which would be recovered in the cost of the binder. However, the foundry's personnel time / resources would be needed to oversee and participate in the evaluation. These evaluations can range from a little as three to five weeks for a simple change to as much as 16 months for large-scale foundry operations with various and changing products.[57]

This type of effort may be undertaken by individual facilities of done collectively through industry association or binder manufactures.

E. Cost Effectiveness

Estimating the cost effectiveness (costs of implementation in dollars per ton of pollutant reduced) of these two proposals is not a straightforward exercise. Because these two proposals rely on the development and implementation of EMPs, the emission reductions and costs due to the implementation of the facility-selected minimization measures cannot be ascertained at this point and is dependent upon the measures selected by the operators of the affected facilities and the recommendations of the District. However, the cost of the expected emissions reductions due to the implementation of each case study, above, has been estimated.

1. Cost Effectiveness of Case Study 1: Minimization of Air Drafts for Metal Finishing Operations

This measure would help to reduce the impacts of fugitive emissions of PM to a nearby community. The PM emissions from a metal finishing operation with an

annual metal throughput of 20,000 tons are estimated to be approximately 0.15 tons. Annualizing the $25,000 cost of an enclosure over ten years at a five percent interest rate results in an annual cost of $3237. The resulting cost-effectiveness is $21,600 per ton of PM.

2. Cost Effectiveness of Case Study 2: Upgrading PM_{10} Emissions Capture and Control Systems at a Foundry

Case Study 2 showed that the annualized cost of an emissions collection system and extra carrying capacity of a baghouse were apportioned based on capacity (22,000 dscfm divided by 68,000 dscfm or 0.32) to be $459,000. The additional carrying capacity of this baghouse (22,000 dscfm) theoretically could be used to minimize fugitive emissions from tapping, pouring and casting operations. The estimated uncontrolled PM_{10} emissions from pouring and cooling 20,000 tons of steel is estimated to be 7.5 tons per year (based on a pouring emission factor of 0.5 pounds of PM10 per ton of steel poured (lbs/ton) and a mold cooling emission factor of 0.25 lbs/ton).[58] If a capture efficiency of 85 percent and a control efficiency of 99 percent were achieved, an emissions reduction of 6.3 tons of PM_{10} per year would result. The resulting cost-effectiveness based in an emissions reduction of 6.3 tons of PM_{10} would be about $72,800 per ton of PM_{10} reduced.

3. Cost Effectiveness of Case Study 3: Shakers to Reduce Carryout onto Public Roadways

Based on an annual scrap metal throughput of 400,000 tons and a quarter mile roadway, staff estimated the potential amount of carryout to be approximately three tons of PM that could be re-entrained into the air. The use of a tire shaker could reduce this amount up to 75 percent or up to three tons per year, resulting in a cost effectiveness of $215 per ton reduced based on a capital cost of $5,000.

4. Cost Effectiveness of Case Study 4: Reducing Fugitive PM_{10} Emissions from Transfer Operations at a Metal Recycling Facility

If implementation of this minimization measure could reduce fugitive emissions from transfer operations resulted in an overall emission reduction of 10 percent for a facility, the cost effectiveness for this would be approximately $69,500 per ton of PM reduced. This assumes about six tons of PM emissions are available to be reduced.

5. Cost Effectiveness of Case Study 5: Dust Control for Open Spaces and Stockpiles Using Industrial Misters

If implementation of this minimization measure could reduce fugitive emissions from transfer operations resulted in an overall emission reduction of 10 percent for a facility, the cost effectiveness for this would be approximately $105,250 per

ton of PM reduced. This assumes a total of six tons of PM emissions are available to be reduced from a total of nine tons.

6. Cost Effectiveness of Case Study 6: Installation of Screened Fences as Wind Barriers

If implementation of this measure contributes at least 10 and 20 percent respectively for fences that are 22 and 35 feet high of the overall emissions reductions available, the cost effectiveness of these minimization options would range be approximately $200,000 per ton.

7. Cost Effectiveness of Case Study 7: Switching to Lower VOC Binder Formulation

Case Study 7 illustrated that the cost of switching from a phenol-based binder system to one with a lesser phenol content was essentially zero. (It must be noted that this is a unique circumstance and cannot be expected to applicable to all mold and core making operations.) Under this scenario, the VOC emissions reductions were estimated to be 16.8 tons per year. Of this VOC reduction, a substantial fraction could be attributable to odorous phenolic compounds. The resulting cost effectiveness for this case study is zero.

Table 16 summarizes the cost effectiveness for the above case studies.

Table 16
Cost Effectiveness for Selected Case Studies

Case Study	**Annualized Costs**	**Estimated Emission Reduction** (tpy)	**Cost Effectiveness** ($/ton)
1	$3,250	0.15	$21,600
2	$459,000	6.3	$72,800
3	$650	3	$215
4	$41,672	0.6	$69,500
5	$539,050	0.6	$105,250
6	$120,000 to $240,000	0.6-1.2	$200,000
7	$0	16.8	$0

F. Socioeconomic Analysis

Section 40728.5 of the California Health and Safety Code requires an air district to assess the socioeconomic impacts of the adoption, amendment or repeal of a rule if the rule is one that "will significantly affect air quality or emissions limitations." BAE Urban Economics of Emeryville, California has prepared a

socioeconomic analysis of the proposed rule and it is attached to this report as Appendix B.

In order to estimate the economic impacts on the affected industries of enacting Rule 12-13 and Rule 6-4, the socioeconomic analysis compares the annualized compliance costs for these industries with their ten-year average profit ratio. The analysis uses data from the District, Dun & Bradstreet, InfoUSA, company annual reports and SEC filings, and the Internal Revenue Service (IRS). The analysis indicates that:

- While some of the case study solutions appear to have compliance costs that are greater than 10 percent of annual profits, the structure of these rules is driven by the EMP, which would be developed by each business and as such, would exclude solutions that are not considered financially feasible by the business itself. As a result, no employment impacts are anticipated due to implementation of these rules.

- While some of the proposed solutions would appear to result in significant direct impacts, the approach to this rule is to allow the affected businesses to suggest and utilize solutions that would be financially feasible, i.e., they would not be required to implement solutions that might result in closure and significant direct impacts. As a result, the rule adoption would not result in any foreseeable indirect or induced impacts either.

The socioeconomic analysis conducted for these proposals concluded that the proposals would result in:

- No anticipated employment impacts are due to implementation of these rules;
- No foreseeable regional indirect or induced impacts;
- No significant impacts to small businesses due to the flexibility of plan requirements.

G. Incremental Cost Analysis

Section 40920.6 of the California Health and Safety Code requires an air district to perform an incremental cost analysis for any proposed Best Available Retrofit Control Technology rule or feasible measure. The air district must: (1) identify one or more control options achieving the emission reduction objectives for the proposed rule, (2) determine the cost effectiveness for each option, and (3) calculate the incremental cost effectiveness for each option. To determine incremental costs, the air district must “calculate the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option.”

1. Incremental Cost Effectiveness for the Proposed Rule 12-13

To estimate the incremental cost effectiveness of compliance with a more stringent option, staff used Case Study 2 to compare each of the two regulatory proposals with the 2011 draft proposal that contained specific capture and control limits for PM and VOC emissions. Under the 2011 draft proposal, affected foundries, forges, and metal recyclers operating shredder would be required to achieve an 85 percent capture efficiency and control emissions of PM to at least 0.002 grams per dry standard cubic foot (at least 99 percent control) and reduce organic compounds (VOC) emissions by 95 percent or to 5 parts per million. To achieve these levels of capture and control would require the installation of enclosures, hoods, and/or partitions with air movement equipment to create negative pressure and highly effective PM and VOC controls. Table 17 lists the equipment needed and cost associated with each piece of equipment for a medium size-foundry with a metal throughput of 20,000 tons per year.

Table 17
Control Equipment, Capital and Annualized Costs for Case Study 2

Equipment / Control Device	Capital Costs	Annualized Costs
Emissions Capture System	$354,719	$45,936
Baghouse (50,000 dscfm)	$948,406	$122,819
Carbon Adsorption Unit	$2,296,462	$297,392
TOTAL	**$3,599,587**	**$466,147***

* Note that the total annualized cost presented do not include annual operating costs.

The emissions reductions based on the differences between the current emissions limits for both PM and VOCs and the 2011 draft proposal are listed in Table 18.

Table 18
Emissions and Incremental Emission Reductions for PM and VOCs for Case Study 2

Pollutant	Emission Reduction Due to 2011 Draft Proposal (tpy)	Emission Reduction Due to the NESHAP or Permit Conditions (tpy)	Incremental Emission Reduction (tpy)
PM	6.3	6.1	0.2
VOC	1.4	1.2	0.2
TOTALS	**7.7**	**7.3**	**0.4**

The incremental cost effectiveness is the ratio of the annualized costs and emissions reductions which is $466,147 divided by 0.4 tpy, which results in a

value of $1.17 million per ton of pollutant reduced. If an existing capture system could be used, the incremental cost effective would be $1.05 million per ton of pollutant reduced. If an existing baghouse could achieve the standard using state-of-the-art bags, the incremental cost effectiveness would be $858,000 per ton of pollutant reduced.

2. Incremental Cost Effectiveness for Proposed Rule 6-4

PM emissions for metal recycling and shredding operations range between 0.13 and 5.6 tpy. The shredding / hammermill operation must meet a PM emission limit of 0.01 gr/dscf. The 2011 draft proposal required the installation of an enclosure and an abatement device that meets an emissions limit of 0.002 gr/dscf. Implementation of these requirements should result in a PM emission reduction of at 80 percent or 4.48 tons (based on the higher PM emission value of 5.6 tpy). Table 19 provides the costs to enclose the shredding / hammermill and the cost of a PM abatement device that would meet the 0.002 gr/dscf limit.

Table 19
Control Equipment, Capital and Annualized Costs for Case Study 2

Equipment / Control Device	Capital Costs	Annualized Costs
Shredder Enclosure	$1.70 million[59]	$220,150
Baghouse (50,000 dscfm)	$948,406	$122,819
TOTAL	**$2.65 million**	**$342,969***

* Note that the total annualized cost presented do not include annual operating costs.

The incremental cost effectiveness is the ratio of the annualized costs and emissions reductions which is $343,000 divided by 4.48 tpy, which results in a value of $76,560 per ton of PM reduced. The high incremental costs illustrated in this section are the reason that emissions limits consistent with the 2011 draft proposal are not included in the final proposal.

VII. ENVIRONMENTAL IMPACTS

Pursuant to the California Environmental Quality Act, the District has had an initial study for the proposed rules prepared by Environmental Audit, Inc. of Placentia, California. The initial study concludes that there are no potential significant adverse environmental impacts associated with the proposed rules. One comment was submitted and the comment and staff response are included in Appendix C. A negative declaration is proposed for approval by the District Board of Directors.

VIII. REGULATORY ANALYSIS

Section 40727.2 of the Health and Safety Code requires an air district, in adopting, amending, or repealing an air district regulation, to identify existing federal and District air pollution control requirements for the equipment or source type affected by the proposed change in air district rules. The air district must then note any differences between these existing requirements and the requirements imposed by the proposed change.

The proposed two new rules are drafted to ensure that their requirements do not conflict with federal regulations and are consistent with district rules that apply to the affected facilities. Federal regulation and District rules form the regulatory foundation upon which the proposals build. The five federal NESHAPs that potentially affect the foundries regulate process emissions of PM by establishing emissions limits, process conditions, and work practices standards for both ferrous and non-ferrous foundries. The Solvent Cleaning NESHAP affects solvent cleaning operations that occur at metal recycling facilities. The Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting (District Rule 11-15) also sets emissions limits, process conditions, and work practices standards. Table 20 summarizes the emissions standard contained in these regulations.

Table 20
Federal and State Regulations and Their Affected Processes

Rule / Regulation	Process
NESHAP for Iron and Steel Foundries: 40 CFR Part 63, Subpart EEEEE	Electric arc furnace
	Electric induction furnace
	Scrap preheater
	Cupola furnace
	Pouring area /station
NESHAP for Secondary Aluminum Production: 40 CFR Part 63, Subpart RRR	Sweat furnace
	Dross-only furnace
	Scrap dryer/delacquering kiln/decoating kiln
	Aluminum scrap shredder
NESHAP for Electric Arc Furnace Steelmaking Facilities: 40 CFR Part 63, Subpart YYYYY	Electric Arc Furnace
	Electric Induction Oven
NESHAP for Iron and Steel Foundries: 40 CFR Part 63, Subpart ZZZZZ	Furnace
NESHAP for Aluminum, Copper, and Other Nonferrous Foundries: 40 CFR Part 63, Subpart ZZZZZZ	Furnace
Solvent Cleaning NESHAP: 40 CFR Part 63 Subpart T	Halogenated solvent cleaning operations
ATCM for Emissions of Toxic Metals from Non-Ferrous Metal Melting	Emission points and collection systems

These regulations address the process emissions while the proposals would further address fugitive emissions from the affected sources and other operations at the affected facilities. While these regulations also contain requirements that affect fugitive emissions, the District has determined that those requirements do not adequately address fugitive emissions. Because affected facilities would be required to list and implement all the measures currently employed to reduce fugitive emissions, including those measures born of federal, state, District regulation, the proposals are not duplicative of these regulations.

IX. DISTRICT STAFF IMPACTS

District staff resources would be impacted by the requirement for each affected facility to develop and submit to the District an Emissions Minimization Plan. District staff would review the EMP for accuracy and completeness, release the EMP for public comment, and review it for approval by the APCO. The elements of the approved EMP would be incorporated into the facility's operating permit and monitored for compliance. Further, to assist the facilities in preparing an EMP, District staff would develop compliance guidance documents to help streamline the EMP development, review and approval process. The facilities would also periodically update their EMPs which would result in District reviews in the future.

As the EMPs are implemented, the causes of odorous impacts should decrease. This should result in a decrease in the number and frequency of community odor complaints. This would, as a consequence, reduce District staff resources in investigating odor complaints.

X. RULE DEVELOPMENT / PUBLIC CONSULTATION PROCESS

Throughout the development of these proposals, staff has engaged in an extensive public consultation process. Staff has hosted numerous meetings, participated in numerous stakeholder-hosted meetings, held four workshops on the two initial draft proposals in June, 2011 and July 2012, and has received and considered a considerable amount of feedback from stakeholders.

The process involved:

- Workshops;
- Multiple meetings with stakeholders, including:
  - Facility owners / operators and industry association representatives,
  - Community groups,
  - Public officials and their staff members,
  - University of California housing officials and residents;
- Attendance at multiple community meetings;

- Correspondence and telephone conferences with the following governmental agencies:
  - US EPA,
  - DTSC,
  - SCAQMD,
  - Yolo –Solano Air Pollution Control District
  - ARB,
  - United States Department of the Interior, Fish and Wildlife Service
  - Maricopa County Air Quality Department, Arizona,
  - California State Water Board,
  - Regional Water Quality Control Boards, and
  - Bay Area Certified United Program Agencies;
- Facility visits (number of visits):
  - PSC – Berkeley (3),
  - CASS – Oakland (3),
  - AB&I – Oakland (2) ,
  - US Pipe – Union City (3),
  - A&B Die Casting – Rodeo (1),
  - PCC Structurals – San Leandro (2),
  - Berkeley Forge – Berkeley (1),
  - USS / POSCO – Pittsburg (2),
  - Schnitzer Steel – Oakland (2),
  - Schnitzer Steel – San Jose (1),
  - Pick-N-Pull – San Jose (1),
  - Sims Metals – Richmond (2),
  - Sims Metals – Redwood City (2),
  - Waste Management, Davis Street Transfer Station – San Leandro (1),
- Conference calls;
  - Binder manufacturers,
  - Industry association representatives.

District staff hosted two sets of workshops for two draft proposals. The first draft of Rule 12-13: Metal Melting and Processing Operations and a workshop report were published on June 23, 2011 and two workshops (one in Oakland on July 27 and another in Redwood City on July 28, 2011) were held to present, discuss, and receive comments on the June draft regulation. Both workshops were well attended and numerous comments were received. Major comments included:

- The draft proposal is a one-size-fits-all approach to regulate a disparate industry;
- The draft rule should be bifurcated – one rule for foundries and forges and another for recycling and shredding operations;
- Emissions limits are too stringent and not appropriate for the metal melting industry;
- Monitoring for odors should occur more frequently;

- Exemptions should be based on emissions in consideration of cumulative impacts, especially in CARE areas, not on metal throughput.

In response to the comments received on the initial draft of the proposal and based on additional research and analyses, staff made major revisions, including bifurcating the proposal to better distinguish between metal production and metal recycling industries, and the removal of emissions standards. A second workshop package, including the two draft rules and a second workshop report, was published June 2012 and a second series of workshops were hosted in July 2012. Comments on the 2012 proposal included the following:

- The draft rules should include quantifiable fugitive emission reduction goals that are necessary to improve public health by a specified deadline;
- "Technical and economic feasibility" should be clearly defined in the rules;
- The clean metal exemption should be expanded to include other metals (e.g.: zinc, brass and bronze) to be consistent with other regulations that consider clean metals;
- Allow for the extension of the public comment period and the potential for a public meeting;
- Reinstate and strengthen specific emissions limits, and add emission standards for toxics including metals, sulfur compounds, VOCs, dust, smoke, and any additional non-odorous toxics known to be emitted (not just particulate matter and odors).

Staff reviewed and considered comments made regarding the July 2012 draft proposals and made some changes that are reflected in the final proposals. The final proposals reflect some of the comments received, for example:

- The 30-day public comment period may be extended upon request and District consideration for a public meeting was explicitly included in the language of the Rule; and
- The exemption for clean metals was expanded to include other metals in addition to aluminum.

XI. CONCLUSION

Pursuant to Section 40727 of the California Health and Safety Code, the proposed rules must meet findings of necessity, authority, clarity, consistency, non-duplication, and reference before the Board of Directors may adopt, amend, or repeal a rule. The proposed rules are:

- Necessary to protect public health by ensuring reduction in PM, including toxic metals, and by reducing the impacts of odorous to nearby residents to meet the commitment of Control Measure SSM-1 of the Bay Area 2010 Clean Air Plan;

- Authorized by California Health and Safety Code Sections 40000, 40001, 40702, and 40725 through 40728;

- Clear, in that the rules specifically delineate the affected industry, compliance options, and administrative requirements for industry subject to this rule, so that its meaning can be easily understood by the persons directly affected by it;

- Consistent with other California air district rules, and not in conflict with state or federal law;

- Non-duplicative of other statutes, rules, or regulations; and,

- Implementing, interpreting and making specific and the provisions of the California Health and Safety sections 40000 and 40702.

A socioeconomic analysis prepared by Bay Area Economics has found that the proposed rules should not have a significant economic impact or cause regional job loss. A California Environmental Quality Act (CEQA) analysis prepared by Environmental Audit, Inc., concludes that the proposed rules would not result in adverse environmental impacts. District staff has reviewed and accepted this analysis as well. The CEQA document was made available for public comments and one comment was submitted. The comment and response are found at the end of Appendix C: CEQA Environmental Analysis and Negative Declaration.

The proposed rules have met all legal noticing requirements, have been discussed with the regulated community and other interested parties, and reflect the input and comments of many affected and interested stakeholders. District staff recommends adoption of proposed new Rule 12, Regulation 13: Foundry and Forging Operations; proposed new Rule 6, Rule 4: Metal Recycling and Shredding Operations; proposed amendments to District Regulation 2, Rule 1: General Requirements; and adoption of the CEQA Negative Declaration.

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55 Frank Barbeau, Sims Metal Management, Email, September 12, 2012.

56 David Polvi, Pacific Steel Casting, Email, October 29, 2012.

57 Jeff Krause, HA International, Telephone Conversation, February 20, 2013.

58 Avogadro Source Test at PSC, August 30, 2006.

59 Stipulated Final Judgment and Order, People of the State of California vs. SA Recycling, LLC and Sims Metal West, LLC, Case No. BC458943, August 31, 2011

APPENDIX A

Comments and Responses to Proposed Rule 12-13, Proposed Rule 6-4, and Proposed Amendments to Rule 2-1

Comments and Responses to Proposed Rule 12-13, Proposed Rule 6-4, and Proposed Amendments to Rule 2-1

The District has received comments from numerous stakeholders on proposed Rule 12-13: Foundry and Forging Operations; proposed Rule 6-4: Metal Recycling and Shredding Operations; proposed amendments to Regulation 2: Permits, Rule 1: General Requirements; and the associated Staff Report. This document contains a summary of those comments – with similar comments from different stakeholders grouped and condensed into one comment – along with staff responses to the comments. The following is a listing the stakeholders who have provided comments and the abbreviation used to identify the commenter associated with the summarized comments. All comment letters and emails received during the comment period are included at the end of this document.

Abbreviations	Commenters	Date Received
A. Eble	Anita C Eble 19 Oakvale Ave Berkeley, CA 94705	March 13, 2013
A. Wang	Alex Wang 1405 Seventh St., Apt. E Berkeley, CA 94710	March 13, 2013
Acorn	Leroy Gaines, Principal Acorn Woodland Elementary	March 29, 2013
ACTA	Kelly D. Carlisle Founder, Executive Director Acta Non Verba: Youth Urban Farm Project P.O. Box 22944 Oakland, CA 94609	March 29, 2013
ATBC	Rev. Daniel Buford Director, Prophetic Justice Ministry Allen Temple Baptist Church	March 29, 2013
B. Atkinson	Barbara Atkinson 1428 7th St. Berkeley, CA 94710	March 14, 2013
B. Yeates	Bill Yeates 3120 Montclaire St Sacramento, CA 95821	March 15, 2013

Abbreviations	Commenters	Date Received
B. DeSchepper	Brett DeSchepper 1031 Pomona Ave. Albany, CA 94706	March 13, 2013
C. Duenas	Cathy Duenas 1015 Jones St. Berkeley, CA 94702	March 14, 2013
C. Lerza	Cathy Lerza 1340 Curtis St. Berkeley, CA 94706	March 13, 2013
C. Lish	Christopher Lish PO Box 113 Olema, CA 94950	March 13, 2013
C. Teltschick-Fall	Carol Teltschick-Fall 534 Dimm St. Richmond, CA 94805	March 13, 2013
CBE	Roger Lin, Staff Attorney Communities for a Better Environment 1904 Franklin Street, Suite 600 Oakland, CA 94612	March 29, 2013
California Air Resources Board	Ava Yaghoobirad California Air Resources Board PO Box 2815 Sacramento, CA 95812	April 8, 2012
CMC	James Simonelli, Executive Director California Metal Coalition 1215 K St, 17th Flr, Sacramento, CA 95814	March 29, 2013
D. Chatfield	David Chatfield 124 Eugenia Ave. San Francisco, CA 94110	March 13, 2013
D. Larson	Denny Larson PO Box 1784 El Cerrito, CA 94530	March 14, 2013

Abbreviations	Commenters	Date Received
D. Leri	Dean Leri 2 Covent Lane Emeryville, CA 94608	March 13, 2013
EnCompass	Minh-Tram Nguyen, Principal EnCompass Academy 1025 81St Avenue Oakland, CA 94621	March 29, 2013
E. Schnabel	Erik Schnabel 229 Dore St. San Francisco, CA 94103 March 13, 2013	March 13, 2013
HOPE	Sabrina Wu, Project Director HOPE Collaborative 221 Oak Street, Ste. D Oakland, CA 94607	March 27, 2013
J. Lounsbury	James Lounsbury 17055 Broadway Ter Oakland, CA 94611	March 14, 2013
J. Schroeder	Janice Schroeder 1610 Curtis St. Berkeley, CA 94702’	March 14, 2013
K. Fiene	Karen Fiene 1207 Peralta Ave. Berkeley, CA 94706	March 13, 2013
K. Reed	Kristin Reed 681 47th Ave San Francisco, CA 94121	March 14, 2013
L. Weiner	Linda Weiner 72 Gates Street San Francisco, CA 94110	March 31, 2013
M. Ambrose	Melissa Ambrose 674 Precita Ave San Francisco, CA 94110	March 14, 2013

Abbreviations	Commenters	Date Received
M. Gordon	Margaret Gordon 1747 14ST Oakland, CA 94607	March 14, 2013
M. Merz	Michael Merz 745 Las Colindas Rd San Rafael, CA 94903	March 13, 2013
M. Roberts	Megan Roberts 4020 Roosevelt Ave Richmond, CA 94805	March 14, 2013
M. Siegal	Meryl Siegal 1144 Cedar St. Berkeley, CA 94702	March 13, 2013
M. Stagg	Musia Stagg 3234 Ettie St. Emeryville, CA 94608	March 25, 2013
N. Schimmel	Nancy Schimmel 1639 Channing Way Berkeley, CA 94703	March 14, 2013
P. Fugazzotto	Peter Fugazzotto 18 Azalea Avenue Fairfax, CA 94930	March 13, 2013
Pillsbury	Margaret Rosegay Pillsbury Winthrop Shaw Pittman LLP Four Embarcadero Center, 22nd Floor San Francisco, CA 94111	April 2, 2013
PSC 1	David Polvi, CHMM, CET Director, Environmental Pacific Steel Casting Co. 1333 Second Street Berkeley, CA 94710	March 26, 2013
PSC 2	David Polvi Pacific Steel Casting Co.	March 29, 2013

Abbreviations	Commenters	Date Received
R. Breech	Ruth Breech 6263 Bernhard Ave Richmond, CA 94805	March 13, 2013
R. Long	Russell Long 29 Toledo Way San Francisco, CA 94123	March 13, 2013
Jalonne WN	Jalonne White-Newsome 50 F Street, NW, 8th Floor Washington, DC 22193	March 14, 2013
S. Hendricks	Stephenie Hendricks 55 Hillcrest Dt San Anslemo, CA 94960	March 14, 2013

COMMENTS AND RESPONSES

Regulatory Proposals:

Applicability

Comment: Auto dismantling facilities that conduct depollution operations and crush cars prior to transport to a shredder facility are subject only to the recordkeeping requirements in Sections 6-4-501 and 6-4-502, regardless of their annual metal throughput.

Pillsbury

Response: Under the proposed Regulation 6, Rule 4, an auto dismantling facility that conducts depollution operations and that crushes autos but that does not produce, receive, or process scrap metal containing shredder residue is subject to the Rule's recordkeeping and monitoring requirements. This facility is not subject to the Rule's standards or administrative requirements, regardless of its metal throughput, as long as it meets the requirements for a limited exemption under Section 6-4-104.

Comment: Small metal shredders should not be exempt from the EMP requirements. These facilities have the same, if not a greater, potential to generate fugitive emissions, as they likely do not employ the same types of abatement equipment or implement Best Management Practices comparable to those implemented by large facilities. They also may not implement the same level of scrap acceptance requirements implemented by the larger shredder facilities, or treat their shredder residue in the manner approved by the Department of Toxic Substances Control. In order to ensure a level playing field among all metal shredders (large and small, mobile and stationary), the rule should be revised to provide that all metal shredders are subject to the EMP requirements,

including those that have a throughput of less than 1,000 tons in a rolling 12-month period.

Pillsbury

Response: The District is aware of only two auto shredding operations in the District, those at the facilities addressed by the proposed Regulation 6, Rule 4. These are at Schnitzer Steel Industries, located in Oakland, and Sims Metal Management, located in Redwood City. District Regulation 2: Permits, Rule 1: General Requirements requires that a shredding operation with a motor with a horsepower rating of 25 horsepower or greater obtain and maintain a District permit to operate. Thus, other metal shredding operations would generally require a permit to operate.

Definitions

Comment: Proposed "Rule 12-13 only requires an Emissions Minimization Plan that neither defines 'minimization' nor imposes any specific emissions limits."

CBE

Comment: The District should more accurately define "minimization" contained in both proposed rules. The current definition: "the reduction to the smallest possible amount" is unachievable and does not correspond with the rule language. The definition of "minimization should read as follows: "the reduction to the smallest possible amount, based on technical and economic feasibility."

CMC, Pillsbury, PSC 2

Response: The addition of technical and economic feasibility to the definition of minimization is not needed. Both rules set the criteria for review and approval of Emissions Minimization Plans in Section 405. Section 12-13-405.3 and 6-4-405.3 specifically state that any recommendations made by the APCO to the proposed plans must be based on technical and economic feasibility and made in consideration of worker health and safety.

District staff added a definition of the term "minimization" in both proposed Rules, in response to previous Public Workshop commenters requesting the inclusion of a definition. The Rules' definition derives from and is the same definition in *The Oxford Dictionary and Thesaurus, American Edition*, Oxford University Press, and as such, will provide a common understanding and meaning of the term. Both rules require that an owner or operator of certain facilities submit an Emissions Minimization Plan (EMP) to identify and implement measures to minimize fugitive emissions of particulate matter and odors. Thus, while the term "minimization" in both Rules means uniformly the reduction of these contaminants to the smallest possible amount, the application of the term "minimization" and what will constitute the smallest *possible* amount may differ at each facility.

It is correct that neither proposed rule includes source-specific emissions limits. There are two reasons. First, the purpose of the EMP is to identify and address fugitive

emissions from operations that are not already subject to abatement and emission limits under State clean air pollution laws and federal regulations. These fugitive emissions are the most difficult to control by simple collection and containment due the nature of a facility's operations. For example, some operations are [often] conducted in open indoor/outdoor areas; the District understands that sometimes those physical arrangements exist due to considerations of worker health and safety. Thus, requiring an owner or operator to submit an EMP that requires each facility to identify the most feasible measures to control fugitive emissions based on the unique arrangement of the facility's physical plant and operations, taking worker health and safety into consideration, is the best approach at this time. Second, with respect to foundry operations, (proposed Regulation 12, Rule 13) there are already State and Federal emissions limits and District rules and permit conditions on the most significant sources of emissions, furnaces, and other significant emissions sources. The EMP will enhance air pollution control at these facilities by addressing the remaining emissions from these facilities which, due to the reductions achieved by the process emission limits, are the lion's share of the facilities' overall emissions. Because of this, and due to the unique layout, operation and practices at each facility, and the difficulty in controlling fugitive emissions with conventional abatement equipment, staff believes the proposed Emissions Minimization Plans are the best approach for reducing emissions to the community from these facilities. Further, the plan-based approach allows for improvement over time from review and modification of future iterations of plans.

Comment: The District should make a distinction between the intermediate processing materials known as "aggregate" and "shredder residue," which is the final residual material (or waste) that remains after all ferrous and nonferrous metal separation and removal operations are completed. Because both aggregate and shredder residue have the potential to generate fugitive emissions (and should be addressed in the EMP), it is important to distinguish between these two categories of materials since they are inherently different and are managed differently.

Pillsbury

Response: The District has proposed a minor change in the definition of "shredder residue" to accommodate this concern. The change does not impact the implementation of the rule and is not considered substantive.

Comment: The proposed rule still contains a definition for "Scrap Dryer/Delacquering Kiln/Decoating Kiln) (Section 6-4-210). Consistent with the District's deletion of the definition of "Sorting Operations" (former Section 6-4-214), the related definition in Section 6-4-210 should also be deleted, as it is also an artifact from the original draft rule that applied to both metal melting facilities and to scrap metal recycling facilities.

Pillsbury

Response: The District agrees with this comment. Staff has deleted this definition. The proposed Regulation 6, Rule 4 does not impose any standards or EMP requirements on scrap dryers, delacquering kilns, or decoating kilns. Accordingly, this deletion does not make the Rule less stringent. Moreover, to staff's knowledge, none of the facilities

subject to this Rule has a scrap dryer, a delacquering kiln, or a decoating kiln at this time. In the future, installation of such equipment will require a District authority to construct and permit to operate and would be subject to regulatory review. Deletion of the definition is not a substantive change to proposed Rule 6-4.

Standards: Violation for Lack of Approved Plan

Comment: The following provision should be eliminated: Section 12-13-301.2: "Thirty days following the disapproval of the EMP by the APCO, the owner or operator of a foundry or forge shall be in violation of this section." This unnecessarily complicates a process where additional time may be needed to effectively establish an EMP. It is unclear whether a violation is triggered when more than 30 days are required to address District recommendations to a plan or when correction to an EMP are required, or when violations or permit changes re-open the EMP.

CMC, PSC 2

Response: The District appreciates the commenters' desire for adequate time to prepare a final, approved EMP. The commenters may misunderstand Section 12-13-301.2, which is included now in Regulation 6, Rule 4 also (6-4-301.2). The purpose of these Sections is to establish a final deadline by which the owner or operator of facility must operate with an approved EMP plan or be deemed in violation of Section 301. The Rules provide a process for a facility to submit a proposed EMP, and for extended review and revision of a facility's proposed EMP with the APCO to finalize an approved EMP (See Sections 6-4-505.3 and 6-4-405.4 and their counterparts Sections 12-13-405.3 and 12-13-405.4.). If, following such review(s), the APCO concludes that the District cannot approve the proposed EMP, the APCO will disapprove that final submission and provide notice that 30 days thereafter, the owner or operator will be in violation of the requirement to operate in accordance with an approved EMP. This notice of disapproval effectively provides the facility owner or operator an additional 30 days to resolve any outstanding aspects of the EMP. This violation is similar to operating without an approved permit.

Failure to operate the facility in accordance with the approved EMP or other violations of District rules or permit conditions at a facility may, at the APCO's discretion, require a review and modification of the EMP, which will commence a new review process. This is different than a disapproval of an EMP.

Standards: Emission Limits

Comment: The elimination of emission limits in the June 2011 draft Rule 12-13 from the current proposals does not comply with the District's 2010 Clean Air Plan, will produce a significant and negative effect on the environment, and is overall too vague to allow satisfactory public, or even District, participation to ensure these facilities achieve emissions controls.

CBE

Comment: East Oakland is already overburdened by a disproportionate impact of pollution from the operation of facilities such as AB&I. The draft regulation is very weak and would [not] prove to in fact decrease emissions of harmful pollutants. The proposed Rule only requires facilities, such as AB&I, to describe what methods they currently use, and what methods they shall use at some unspecified point in time in the future to minimize, whatever that means, PM and odorous emissions.

Acorn, CBE, HOPE

Comment: Proposed Rule 12-13 "has effectively lost the substance of, and fails as an implementation of, SSM 1 of the CAP for two distinct reasons. First, several organic and toxic compounds do not have odors. These non-odorous substances continue to pollute the environment surrounding our East Oakland residents and are left unaddressed by" the proposed rule. "Second, a mere description of current and proposed practices to minimize emissions, let alone without a definition of minimize, will not change the status quo". The proposed rule needs to include analysis and limitations of those other pollutants, which remain unregulated.

CBE (quoted), Acorn, ATBC, EnCompass, HOPE

Response: The District's Clean Air Plan Stationary Source Measure SSM 1 provides for the District to consider means to "[l]imit emissions of organic compounds, fine particulates, toxic compounds and odors from foundry operations and metal melting facilities in the District." SSM 1 does not specify the specific measures or means to limit such emissions at these facilities. Staff proposes to implement SSM 1 by requiring foundries and forges to control fugitive emissions of odorous substances and particulate matter from key facility operations by development and implementation of an Emissions Minimization Plan. By reducing or controlling odorous substances, the facility is reducing or controlling the emission of organic compounds. Particulate matter includes toxic metal compounds; reduction or control of particulate matter emissions helps reduce emissions of toxic compounds. Staff has expanded the impact of this control measure by requiring large metal recycling facilities to develop and implement Emissions Minimization Plans to control fugitive particulate matter emissions that can also contain toxic compounds.

AB&I Foundry is subject to the requirements of 40 CFR 63, subpart EEEEE, which sets limits on particulate matter, hazardous (toxic) metal emissions, and volatile organic hazardous emissions from foundries and limits the sulfur content of fuel used at foundries. AB&I is also subject to the requirements of District Regulation 9, Rule 1, which limits emissions of sulfur dioxide.

Comment: Adopt the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

A. Eble, A. Wang, Acorn, B. Atkinson, B. DeSchepper, B. Yeates, C. Duenas, C. Lerza, C. Lish, C. Teltschick-Fall, D. Chatfield, D. Larson, D. Leri, E. Schnabel, EnCompass, J. Lounsbury, J. Schroeder, Jalonne WN, K. Fiene, K. Reed, M. Ambrose, M. Gordon, M. Merz, M. Roberts, M. Siegal, M. Stagg, N. Schimmel, L. Weiner, P. Fugazzotto, R. Breech, R. Long, S. Hendricks

Response: While the previous Public Workshop drafts of the rules contained emissions limits for processes in metal recycling facilities, those emission limits would have only addressed emissions from the two auto shredders at Schnitzer and the Sims Redwood City facility. However, fugitive emissions from the collection, transfer, separation and storage of metal scrap would not have been addressed by the earlier proposed emissions limits. Because of the PM limits on auto shredder emissions (District Rule 2-5: Toxic New Source Review), the bulk of the remaining particulate emissions are fugitive, and best controlled by an Emissions Minimization Plan that takes into account the layout and operations at each facility, and can be improved upon over time.

Administrative Requirements: EMP Development & Approval

Comment: Section 12-13-408.2 – Operation and Maintenance Plan Requirements. Some NESHAPs do not require OMM plans to be submitted to EPA. They only require the plans be prepared (e.g., see Subparts ZZZZZ and ZZZZZZ).

US EPA

Response: This was addressed in the proposed rule.

Comment: Redacted versions of EMPs that are suitable for review by the public will contain little detailed substantive information, and public review and comment on the general information contained in the "public" version of the EMP is not likely to add meaningfully to the development of an effective plan. We are also unclear on the purpose of a public hearing, given that the public is already entitled to submit written comments on an EMP and would be free to discuss those comments with staff. The District should revise the rule to provide that EMPs (redacted as necessary to remove confidential business information), once approved by the Air Pollution Control Officer, are public records and may be viewed by the general public.

Pillsbury

Comment: Meaningful public participation is not clearly preserved in the process of review and approval of the EMP. Although the process outline for EMP approval allows for public participation, it risks being illusory. The general public does not have the technical expertise to interpret the workings of a foundry; to decipher what would be the best control technology or even, know what measure would effectively limit emissions.

CBE

Response: The EMPs provide the opportunity for the public to have access to one document that describes the operations and control measures for stationary sources and fugitive emissions at a foundry or metal recycling facility, to the extent such information is not redacted for trade secret or other appropriate reasons. The EMPs are expected to be examined by a wide range of interested parties, including individuals, environmental organizations, and public agencies, such as the California Department of Toxic Substances and the State Water Resources Control Board.

Comment: The only requirements of the District for approval is to ensure that the EMP contains the correct formulaic contents, and either accepts all recommendations of the District, or rejects them with an explanation why it is not incorporating those recommendations. This means that the facility can listen to public comment, receive those recommendations, and then receive its final, approved EMP. Interpreted this way, the District is required to approve an EMP provided that the facility includes explanations for not adopting those recommendations. The District must have final say over the approval of an EMP.

CBE

Response: The scope of EMP is the same for each facility. However, the designated and proposed fugitive emissions minimization measures may differ facility to facility, and the APCO will evaluate the adequacy of measures for each facility. Under Sections 12-13-405.3 and 6-4-405.3, the District would make recommendations concerning the adequacy of the specified measures, based on technical and economic feasibility and made in consideration of worker health and safety. Ultimately, the District has the authority to disapprove what it deems to be an inadequate EMP.

Administrative Requirements: Reporting Requirements

Comment: Proposed Section 6-4-407 states that no later than two years after adoption of the rule, owners/operators must anticipate additional equipment, processes and procedures they might be able to install or implement to further reduce or prevent fugitive emissions, beyond those already contained in the EMP, and provide a schedule for implementation for these future control measures. The purpose of this provision is unclear, especially in light of the five-year review process required by Section 6-4-408, and we believe it is both unreasonable and unworkable. Section 6-4-407 puts facility owners/operators in the untenable position of having to predict the availability of new equipment or other technological advancements and to plan for their installation even in the absence of any determination that further controls are needed, or that such new controls would be cost-effective. This provision should be deleted in its entirety.

Pillsbury

Response: This section provides for a facility to identify and plan for changes and additional measures to include in the first EMP five-year update.

Manual of Procedures: Test Methods

Comment: Section 12-13-601 and 602, Methods for Determining the Cadmium and Arsenic Content of Aluminum references out-of-date test methods.

US EPA

Response: These citations have been corrected in the proposed rules.

Loss of Reg. 2, Rule 1 Permit Exemption for Core and Mold Making Operations

Comment: The BAAQMD Board of Directors should reject the proposed amendment of Regulation 2 unless staff provides more balanced and transparent language, reasoning for why current rules (and proposed rule 12-13) are inadequate, and what benefit would be achieved by making this change. Or at the very least, postpone a decision until the facilities submit the EMP that covers these sources, and the BAAQMD has a chance to review the effectiveness of the EMP.

CMC

Comment: The need and direction for amending Regulation 2, Permits, Rule 1: General Requirements are unclear.

CMC, PSC 2

Response: The proposed amendment to Regulation 2, Rule 1 eliminates the current exemption from the requirement to obtain and maintain a District permit to operate for equipment used for heated shell core and shell-mold making that emits less than 0.25% free phenol by weight of sand. For example, Pacific Steel Casting Company conducts heated shell core and shell-mold manufacturing; that equipment would no longer be exempt from the requirement to obtain and maintain a permit to operate. The proposed amendment enables the District to better track emissions from these sources and to evaluate emissions impacts from these operations similarly to sand mold forming equipment under Regulation 2, Rule 1 if the facility owner or operator modifies or replaces the sources. When a source loses an exemption because of an amendment to Reg. 2-1, it is not deemed a new source (Section 2-1-232), but the facility owner or operator must submit an application for a permit to operate within 90 days of the APCO's written notification of the permit requirement (Section 2-1-424). In such a situation (i.e., a loss of exemption), a permit might impose conditions regarding recordkeeping or throughput limitations consistent with current and past practice, but would not establish any more stringent requirements. Thereafter, the facility owner or operator must apply for an authority to construct a replacement or modification of that source. In this type of situation (i.e., a replacement or modification), the District would determine if the source triggered Best Available Control Technology or BACT (if the source emits 10 lbs/day of a criteria pollutant) under Regulation 2, Rule 2: New Source Review, or Toxics Best Available Control Technology or TBACT (if the source's toxic air contaminant emissions have a cancer risk of greater than 1 in one million or a chronic hazard index of greater than 0.20) under Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants. BACT and TBACT requirements encourage facilities to seek the lowest emitting technology when constructing a new source to avoid additional control requirements.

The impact of fugitive emissions of odors from these previously-exempt sources will be addressed in proposed Regulation 12-13, as are the fugitive emissions from sand mold equipment. Odors might be best controlled by minimizing drafts, for example, even if the emissions were low enough to avoid triggering BACT or TBACT.

Comment: The California Air Resources Board has no comments on the proposed rules.

CARB

Response: Comment noted.

Staff Report, CEQA & Socioeconomic Analyses

Staff Report: Emissions Estimates and Impacts

Comment: It does not appear that the District took into consideration the existence of the Odor Management Plan and its impacts on PM and odorous emissions from Pacific Steel Casting (PSC), when completing the engineering estimates of PSC's PM fugitive emissions. The District appears to have used emissions factors derived from facilities, minus the emission control devices that exist at PSC. This resulted in the District's estimated emissions attributed to PSC being grossly overstated.

CMC, PSC 1, PSC 2

Comment: Estimates of PM emissions and emissions reductions are inflated and can be misleading. These estimates should be revised.

CMC

Comment: Included in the Staff Report, Table 10, page 41, lists PSC annual fugitive emissions at 110.9 tons per year and total annual PM emissions at 170.6 tons per year. These estimations appear to be significantly overstating the current operational conditions at PSC.

PSC 1

Comment: The distribution of emission data that grossly overstates actual emissions can negatively impact PSC's standing in the community by allowing misinformation to continue to be available to the public in the Staff Report. For this reason, PSC requests that the emission data in the report are corrected, to more properly reflect the actual operating conditions at PSC.

PSC 1

Response: The District agrees that the February 2013 Staff Report overestimated the total PM emissions (including fugitive and abated emissions) for PSC. The PM emissions estimates have been revised and are included in the April 2013 version of the Staff Report.

Comment: The District statement included in the Staff Report, on page 40, states "A District engineering analysis of PM emissions at Pacific Steel Casting indicated that fugitive emissions comprise about 65 percent of the facility's total emissions (fugitive and abated PM emissions)," is not feasible nor supported by testing conducted at PSC.

PSC 1

Response: The District estimated a ratio of Pacific Steel Casting's fugitive PM emissions to overall PM emissions (fugitive and abated stack emissions) of 65 percent based on engineering analyses of the emissions profiles of two different foundries, one of which was PSC. This ratio reflects the total resultant PM emissions from a foundry; it accounts for the reductions in process emissions due to abatement devices and indicates the high level of control of the stack emissions from the various processes. This ratio was verified based on the evaluation of a recent emissions analysis of PSC's PM emissions and evaluations of District emissions estimates of the same facility. It is possible that actual ratio is higher than 65%.

Comment: The metals industry currently accounts for one-tenth of one percent of total emissions in the BAAQMD jurisdiction. Additionally, the proposed rules concentrate on approximately eight of the total number of metal facilities regulated by the BAAQMD. Finally, the proposed rules target odors and fugitive emissions, which are the smallest contributors to overall emissions at a metals facility. But fractions of a single percent are what the industry contributes to overall emissions, and fractions of fractions of a single percent are the potential reductions when discussing any rule for the metals industry.

CMC

Response: While the metals industry may account for a small fraction of the overall PM emissions inventory in the Bay Area, there is not any one specific industry that is responsible for the majority of PM emissions. The cumulative total PM emissions can result in exceedances of air quality standards. The metals industry is one such industrial sector where the District found additional reductions could be achieved. The proposed Rules help to implement SSM 1 of the District's 2010 Clean Air Plan, which calls for reduction of PM and odors from metal melting facilities, including foundries.

Comment: Our members live close enough to AB&I to smell its toxic odors day and night. Our community will not benefit from an increase in these fumes; they must be reduced and eventually eradicated if health issues are more important than business revenues

ATCB

Response: The proposed rules are designed to reduce fugitive emission of particulate matter and odors. These are the emissions that directly impact the surrounding communities. The proposed rules concentrate on fugitive emission because the process emissions, those emitted directly from the foundry equipment, are already tightly regulated by existing federal, state, and District regulation and permit conditions. The proposed rules would not supersede, but would complement existing regulations and further reduce emissions of PM and odorous substances – not result in an increase in emissions.

Comment: The District appears to be more concerned with a facility's costs in including such pollution controls, rather than, and at the expense of, my community's health.

Clean jobs and environmental concerns can co-exist, and the District should spend more time to achieve that balance. To simply dismiss one in favor of the other without a fuller analysis is a serious mistake.

Acorn, ATBC, EnCompass

Response: In developing air quality regulations, District staff and the Board of Directors must consider the economic impact to the potentially affected industry. California Health and Safety Code Sections 40703, 40728.5, and 40920.6 require analysis of the cost-effectiveness, incremental cost-effectiveness, and socio-economic impacts of proposed rules. In evaluating metal production and recycling industries, staff determined that the stack emissions of both PM and odorous substance (and other particulate and volatile compounds) are appropriately addressed through the implementation of federal, state, and District emissions limits and operating conditions. However, staff also determined that fugitive emissions are the larger share of emissions from these facilities (at least 65 percent or more of a facility overall emission) and that imposing additional emissions limits would do little to reduce fugitive emissions. It was determined that the best way to address these fugitive emissions would be to require the affected facilities to develop plans to minimize these emissions that would be subject to public comment and District review and approval.

Staff Report: Cost Estimates

Comment: The assumption that an approved EMP can be developed for $750 is misleading. The overall costs of the EMP can exceed $75,000, which is 100-times more than the BAAQMD staff assumptions.

CMC

Response: Staff recognizes that the time and effort expended to develop a facility EMP can vary based on a number of factors. Such factors include the number and complexity of operations at a particular facility and the contents of what would be deemed a complete and approvable EMP. The number of operations required to be addressed in an EMP will vary. For example, one facility will have only have to address metal management operations. Also, whether a facility has extensive emissions minimization activities already in place or needs to develop and engineer proposals will affect cost. Much of the information, such as process flow diagrams and plant layout, and a list of permitted sources and emission limits, should readily be available.

Comment: Case Study 1 only provides the basic construction costs for a room and ignores requirements for this area to protect the workers and capture emissions. An enclosed room, standing apart from the facility is not effective. A better assessment of Case Study 1 would be to include air flow assessments, worker safety, and needs for engineering controls or additional abatement. As such, a more accurate range for Case Study 1 would be $75,000-$150,000.

CMC

Response: The cost estimates presented in this case study were based on cost

incurred by a facility that erected such a structure to minimize fugitive emissions by reducing drafts. The case study was presented to illustrate that effectively reducing air drafts that contribute to fugitive emissions can be accomplished economically.

Comment: It is confusing for the BAAQMD Board of Directors and public to see a staff report that shows annualized cost and cost effectiveness per ton for any binder change to be $0. Without specifics of the "evaluation," assumptions could be made that there is no cost to the facility for this analysis.

CMC

Response: The cost estimates presented in Case Study 7 were provided by and are based on an actual evaluation of a casting operation at a potentially affected facility. Further, discussions with a binder manufacturer disclosed that it was that manufacturer's policy to incur the cost of the evaluation and that these cost would be reflected in the cost of the replacement binders. While these costs may not be typical of the potential cost of replacing a binder system, it illustrates a real world example where cost information was available.

Staff Report: Employee Estimates

Comment: This rule will impact thousands of employees, but the staff report underreports the number of employees at each company. As an example, CASS employs much more than 20 employees. An accurate number of employees should be provided in this public staff report.

CMC

Response: The District appreciates this comment and the number of employees has been revised the employment numbers in the April 2013 Staff Report where additional documentation has been provided.

CEQA or Socioeconomic Analysis

Draft Rule 12-13 Will Have a Significant and Negative Effect on the Environment

The Socio-economic analysis suggests that emissions control measures in an EMP would only be required to the extent they are below ten percent of a facility's profit. BAAQMD uses the California Air Resources Board's ten percent threshold as a proxy for burden. As data become available at inspection and analysis of each individual foundry at the EMP approval stage proposed by Draft Rule 12-13-405.5, it is imperative that the District perform a more comprehensive and facility specific socioeconomic impact analysis in deciding whether to approve a facility's EMP.

While it correctly concludes that the Proposed Rule's contemplated EMPs will not impose an unreasonable cost on individual facilities or the region as a whole, the Socio-Economic Analysis lacks any assessment of the cost of failing to address pollution from these facilities. The dollar costs of excess PM2.5 and pollutants are astronomical, even

looking solely at the costs of diagnosed illness. The District should further consider this fundamental cost of pollution, if not at the Rulemaking stage, certainly at the EMP approval stage as outlined below.

CBE

Response: CEQA case law has clearly established that a proposed project's adverse impact on the environment is to be measured against the existing environment, not measured against what a commenter may prefer that the proposed project accomplishes. The commenter does not suggest a specific adverse impact from the adoption of the proposed rule, but rather suggests that the District needs to perform a more comprehensive socio-economic analysis for each facility in order to assess the viability of potential emission control measures, and further suggests that the costs of uncontrolled pollution should be considered.

Socioeconomic Analysis

Comment: The commenter does not agree with the use of 10 percent of facility profit as a proxy for whether emission measures are feasible.

CBE

Response: The commenter appears to misunderstand the intent of the socioeconomic analysis. Staff analyzed a number of control measures that have been adopted at Bay Area facilities subject to the proposed rule. Clearly, the cost of these measures has been able to be absorbed by the particular facilities. However, the point of the case studies was to emphasize that control measures that have been adopted and may be considered as part of the emissions minimization plans will be tailored to each facility and that measures that may be economically feasible for one facility may be not feasible for another. To that extent, staff agrees that individual facilities' circumstances should be considered when making recommendations to plans. It is for this reason that the proposed rules specify that plans be developed for individual facilities. Neither the provisions of the rule nor the staff report state that a specific percentage of a facility's profits will be used to determine the feasibility of a control measure. Staff has considerable experience calculating costs in rule development and permit determinations. Costs and the technical feasibility of a control measure, as well as any impacts on worker health and safety will all be considered in developing recommendations to emissions minimization plans.

COMMENT LETTERS AND E-MAILS

Comment Received via e-mail, March 13, 2013:

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Peter Fugazzotto
18 Azalea Avenue
Fairfax, CA 94930

I am concerned that the proposed rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

I urge you to adopt stronger rules that will regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Ruth Breech
6263 Bernhard Ave
Richmond, CA 94805

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

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http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Bill Yeates
3120 Montclaire St
Sacramento, CA 95821

This is an urgent matter that requires immediate attention. The citizens of the Bay Area are not being protected from poor air quality because the policies no longer serve them but rather, industry intent only on their own profits at the expense of the public good.

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations.

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

We have always been in the forefront of important issues facing the nation, please don't fail us in this regard.

Thank you.

Karen Fiene
1207 Peralta Ave.
Berkeley, CA 94706

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

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I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Michael Merz
745 Las Colindas Rd
San Rafael, CA 94903

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I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Anita C Eble
19 Oakvale Ave
Berkeley, CA 94705

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http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Erik Schnabel
229 Dore St.
San Francisco, CA 94103

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http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Brett DeSchepper
1031 Pomona Ave.
Albany, CA 94706

I live in one the communities affected most directly by the scrap metal air quality rules. I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area. BAAQMD's job is to protect the health of all Bay Area residents and to insure that we all have clean air. Please don't walk away from your responsibilities.

Thank you.

Cathy Lerza
1340 Curtis St.
Berkeley, CA 94706

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Meryl Siegal
1144 Cedar St.
Berkeley, CA 94702

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http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Alex Wang
1405 Seventh St.
Apt. E
Berkeley, CA 94710

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. Please watch the video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Christopher Lish
PO Box 113
Olema, CA 94950

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

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advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Carol Teltschick-Fall
534 Dimm St
Richmond, CA 94805

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Dean Leri
2 Covent Lane
Emeryville, CA 94608

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

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http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Russell Long
29 Toledo Way

San Francisco, CA 94123

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

David Chatfield
124 Eugenia Ave.
San Francisco, CA 94110

Received via e-mail, March 13, 2013:

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Megan Roberts
4020 Roosevelt Ave
Richmond, CA 94805

As an environmental attorney in the Bay Area and board member of an air quality NGO, I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all of the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

James Lounsbury
17055 Broadway Ter
Oakland, CA 94611

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Jalonne White-Newsome
50 F Street, NW
8th Floor
Washington, DC 22193

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Denny Larson
PO Box 1784
El Cerrito, CA 94530

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Barbara Atkinson
1428 7th St.
Berkeley, CA 94710

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

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http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

melissa ambrose
674 precita ave
san francisco, CA 94110

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http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

stephenie hendricks
55 hillcrest dt
san anslemo, CA 94960

I had asthma as a child and my sister-in-law died of it, so air quality is of great importance to me. I am concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Nancy Schimmel
1639 Channing Way
Berkeley, CA 94703

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

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http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Margaret Gordon
1747 14ST
Oakland, CA 94607

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

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I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Janice Schroeder
1610 Curtis St.
Berkeley, CA 94702

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

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I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Kristin Reed
681 47th Ave
San Francisco, CA 94121

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

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http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Cathy Duenas
1015 Jones St.
Berkeley, CA 94702

Received via e-mail, March 25, 2013:

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Musia Stagg
3234 Ettie St.
Emeryville, CA 94608

Received via e-mail, March 31, 2013:

I am very concerned that the recently revised rules being considered for adoption concerning air pollution regulations for scrap metal recyclers are too weak.

After drafting rules in 2011 that would have covered dozens of facilities, the District, caving into bullying by industry, gutted the previous regulations. See video of clean air advocates being shouted down at a rules workshop:
http://www.youtube.com/watch?v=kaP6OPmezPE

I urge you to consider adopting the previously proposed stronger rules that will better regulate all the scrap metal recyclers in the San Francisco Bay Area.

Thank you.

Linda Weiner
72 Gates Street
San Francisco, CA 94110

From: Steckel.Andrew@epamail.epa.gov [mailto:Steckel.Andrew@epamail.epa.gov]
Sent: Monday, March 25, 2013 10:07 AM
To: Dan Belik; mguzzett@arb.ca.gov
Subject: EPA comments on Bay Area 12-13, 6-4 and 2-1

United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

March 25, 2013

Transmittal of EPA Rule Review Comments

To: Dan Belik, Bay Area Air Quality Management District
dbelik@baaqmd.gov

Mike Guzzetta, California Air Resources Board
mguzzett@arb.ca.gov

From: Andrew Steckel, Rulemaking Office Chief
steckel.andrew@epa.gov

Re: Regulation 12 Rule 13; Regulation 6 Rule 4; and Regulation 2 Rule 1

We are providing comments based on our preliminary review of the draft rules identified above. We support the District's efforts to further reduce emissions from these source categories. Please direct any questions about our comments to me at (415) 947-4115 or to Stanley Tong at (415) 947-4122.

Regulation 12 Rule 13 – Metal Melting and Processing Operations

1. Section 12-13-408.2 – Operation and Maintenance Plan Requirements
This section requires foundries to submit to the APCO, the Operation and Maintenance Plan or the Operation, Maintenance, and Monitoring (OMM) Plan that the foundry "submitted to" EPA.

Some NESHAPs do not require OMM plans to be submitted to EPA. They only require the plans be prepared (e.g., see Subparts ZZZZZ and ZZZZZZ). This section should be amended if the District's intent is to require all OMM plans to be submitted to the APCO, including those just required by the NESHAPs to be prepared, but not submitted to EPA.

2. Section 12-13-601 – Methods for Determining the Cadmium Content of Aluminum
This section references three old ASTMs. The District should consider updating these methods as appropriate.
ASTM E 227-67(1982) – The current version is E 227-90(1996) – withdrawn 2002
ASTM E 607-90 – The current version is E 607-02 – withdrawn May 2011, no replacement
ASTM E1251-88 – The current version is E1251-11

3. Section 12-13-602 – Methods for Determining the Arsenic Content of Aluminum
4th line – …eligibility for exemption under "section (c)(2)," should probably be "section 12-13-103.1"
4th line – note that Method 7061 has been replaced with 7061a. The District may way to investigate if the revised method is appropriate for use.

Last line – possible typographical entry: "Sections 11-15(b)(1) and (b)(3))" are not in Appendix A to Regulation 11 Rule 15.

Regulation 6 Rule 4 Metal Recycling and Shredding Operations

1. Section 6-4-214
Please check if the definition for "Sorting Operations" is correct. Sorting generally means separation of parts based on some property of the material such as size, alloy, or type of metal, whereas section 6-4-214 refers to removal of contaminants.

Sorting Operations: The removal of various contaminants using a scrap dryer, delacquering kiln, or decoating kiln.

Regulation 2 Rule 1 Section 2-1-122

No comments

Pacific Steel Casting Company

Date: March 26, 2013

To: Victor Douglas

From: David Polvi

RE: Staff Report – Inaccurate Pacific Steel estimated PM emissions

The BAAQMD issued a Staff Report, February 2013, presenting three regulatory proposals for the consideration of the District Board of Director's for adoption: proposed new Regulation 12: Miscellaneous Standards of Performance, Rule 13; Foundry and Forging Operations: proposed new Regulation 6: Particulate Matter, Rule 4; Metal Recycling and Shredding Operations: and proposed amendments to District Regulation 2; Permits, Rule 1; General Requirements. The Staff Report, Chapter V. Emissions and Emissions Reductions, Part A. Particulate Matter, include estimated particulate matter emission data for Pacific Steel Casting. District engineering analysis, based on "Grain Loading Chart – Rev 3 with District Flow Rates, Waymon Lee, BAAQMD, April 27, 2011, was used to estimate the PM emissions at Pacific Steel. Pacific Steel believes the data derived from the District analysis is misleading to the public by grossly overstating the PM emissions at Pacific Steel. The purpose of this memo is to request that BAAQMD edit the Staff Report to accurately reflect the current operating conditions and PM emissions at Pacific Steel.

The proposed Regulation 12, Rule 13, addresses the reduction of PM and odorous substances by focusing on fugitive emissions. This would be accomplished through the development of facility-specific plans aimed at minimizing the fugitive emissions of these pollutants, subject to District review, recommendations and approval. On August 31, 2008, BAAQMD approved Pacific Steel's "Odor Management Plan" (OMP), which addresses PM and odorous emission reductions. This OMP has been incorporated into Pacific Steel's operation and maintenance plans since approval by the District. Source testing at Pacific Steel has demonstrated a significant reduction in PM and odorous emissions since implementation of the OMP. It does not appear that the District took into consideration the existence of this plan and the impact the plan has had on the reduction of PM and odors from the facility, when completing their engineering calculation estimate of Pacific Steel PM fugitive emissions. The District appears to have used emission factors derived from facilities, minus the emission control devices that exist at Pacific Steel. This resulted in the District's estimated emissions attributed to Pacific Steel being grossly overstated.

The OMP contains various emission control measures, which efficiently provide for particulate removal and odorous emission control measures. The implementation of the OMP at Pacific Steel included multiple structural improvements and operational controls which now direct plant air flow to plant baghouses and the carbon systems for removal of particulates and odors. All manufacturing operations

are conducted in buildings which are under negative air pressure which directs air flow into stacks leading to the control devices. The air flow at door openings is pulled into the building eliminating a pathway for fugitive PM emissions from the buildings, other than through the designated stacks. Under 40 CFR Part 70.2 and Part 71.2, fugitive emissions are defined as

"*Fugitive emissions* are those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally-equivalent opening"

Source testing at Pacific Steel, has demonstrated Pacific Steel's PM emission control devices operate at greater than 99% efficiency for removal of PM. Actual fugitive PM emissions from Pacific Steel operations is minimal, less than one percent. The District statement included in the Staff Report, on page 40, in A. Particulate Matter "A District engineering analysis of PM emissions at Pacific Steel Casting indicated that fugitive emissions comprise about 65 percent of the facility's total emissions (fugitive and abated PM emissions)," is not feasible nor supported by testing conducted at Pacific Steel. Also included in the Staff Report, Table 10, page 41, lists Pacific Steel Annual Fugitive Emissions (tons) at 110.9 and Total Annual PM Emissions (tons) at 170.6. For the same reasons as above, this estimation appears to be significantly overstating the current operational conditions at Pacific Steel.

Pacific Steel incorporated the OMP into the Company's operation and maintenance plan. The plan has been updated or modified on an ongoing basis to serve as a guide for Pacific Steel to continue to strive toward its goal as an environmentally responsible corporate citizen and to reduce and eliminate the potential sources for fugitive emissions of PM and odors. Pacific Steel believes that great strides towards the achieving its goal have been realized. However, the distribution of emission data that grossly overstates actual emissions, can negatively impact Pacific Steels standing in the community, by allowing misinformation to continue to be available to the public, in the Staff Report. For that reason, Pacific Steel requests that the emission data contained in the report is corrected, to more properly reflect the actual operating conditions at Pacific Steel.

Please contact me if you require any additional information or have any questions concerning this matter.

Thank you,

David Polvi

CC. Daniel Belik

Acorn Woodland Elementary School

Victor Douglas
BAAQMD
939 Ellis Street
San Francisco, CA 94109
vdouglas@baaqmd.gov

March 2013

RE: Comments on Rule 12-13 (Metal Melting and Processing Operations)

Dear Mr. Douglas:

As a stakeholder of East Oakland living close to the facility, American Brass & Iron (AB&I), I write to express my concern regarding the Air District's proposed Rule 12-13. East Oakland is already overburdened by a disproportionate impact of pollution from the operation of facilities such as AB&I. Although I appreciate the District's efforts in developing solutions included in the draft regulation, I was shocked to learn how weak the draft regulation would prove to in fact decrease emissions of harmful pollutants.

Your presentation to the Stationary Source Committee on March 18, 2013 detailed that the regulation would produce community benefits in the form of reducing health risks and decreasing odors. I am pleased by your inclusion of this concept in the draft rule, but without strict emissions limits in the actual final regulation, I, as a community member, am not satisfied that the regulation will actually achieve these community benefits for two reasons.

First, the draft rule only requires facilities such as AB&I to *describe* the facility's current or planned practices for minimizing emissions. There are no actual emissions limits, and only describing how a facility continues to harm us does not get us anywhere closer to reducing health risks.

Second, the draft regulation fails to address non-odorous toxics known to be emitted, such as sulfur compounds, dust and smoke. Please do something about these pollutants – they are poisoning us.

I understand the District's concern that pollution controls may be expensive. However, I do not understand why the District is more concerned with a facility's costs in including such pollution controls, rather than, and at the expense of, my community's health. Clean jobs and environmental concerns can co-exist, and the District should spend more time to achieve that balance. To simply dismiss one in favor of the other without a fuller analysis is a serious mistake.

Sincerely,

//Leroy Gaines//
Principal
Acorn Woodland Elementary

Victor Douglas
BAAQMD
939 Ellis Street
San Francisco, CA 94109
vdouglas@baaqmd.gov

March 27, 2013

RE: Comments on Rule 12-13 (Metal Melting and Processing Operations)

Dear Mr. Douglas:

As a stakeholder of East Oakland working with residents and schools close to the facility, American Brass & Iron (AB&I), I write to express my concern regarding the Air District's proposed Rule 12-13. East Oakland is already overburdened by a disproportionate impact of pollution from the operation of facilities such as AB&I. Although I appreciate the District's efforts in developing solutions included in the draft regulation, I was shocked to learn how weak the draft regulation would prove to in fact decrease emissions of harmful pollutants.

Your presentation to the Stationary Source Committee on March 18, 2013 detailed that the regulation would produce community benefits in the form of reducing health risks and decreasing odors. I am pleased by your inclusion of this concept in the draft rule, but without strict emissions limits in the actual final regulation, I, as a community member, am not satisfied that the regulation will actually achieve these community benefits for two reasons.

First, the draft rule only requires facilities such as AB&I to *describe* the facility's current or planned practices for minimizing emissions. There are no actual emissions limits, and only describing how a facility continues to harm us does not get us anywhere closer to reducing health risks.

Second, the draft regulation fails to address non-odorous toxics known to be emitted, such as sulfur compounds, dust and smoke. Please do something about these pollutants – they are poisoning us.

I understand the District's concern that pollution controls may be expensive. However, I do not understand why the District is more concerned with a facility's costs in including such pollution controls, rather than, and at the expense of, my community's health. Clean jobs and environmental concerns can co-exist, and the District should spend more time to achieve that balance. To simply dismiss one in favor of the other without a fuller analysis is a serious mistake.

Sincerely,

Sabrina Wu
Project Director, HOPE Collaborative

221 Oak Street, Ste. D | Oakland, CA 94607 | ph: (510)444-4133 | fax: (510)444-4819 | www.hopecollaborative.net

Victor Douglas, BAAQMD

San Francisco, CA 94109

vdouglas@baamqd.gov

RE: COMMENTS ON RULE 12-13 (METAL AND PROCESSING OPERATIONS) NOXIOUS ODORS AND HAZARDOUS EMISSIONS IN EAST OAKLAND

Dear Mr. Douglas,

A person in your position is probably already be aware that East Oakland already has a number of toxic "superfund sites" and brownfields and that the inhabitants of this community are considered to be a protected class under the E.P. A.' current definition of Environmental Justice Populations. You may also be aware that East Oakland is destined to be the site of a mega- crematorium that will incinerate over three thousand corpses a year promising a particulate matter nightmare for the residents that have pre-existing respiratory problems that are disproportionate when compared to zip codes in the Oakland Hills. There are numerous laws and regulations to protect the environment in East Oakland, however African American residents do not experience equal protection of these laws in violation of the Equal Protection Clause of the 14th Amendment to the U.S. Constitution. You no doubt understand that you will further the impact of environmental racism in East Oakland if the BAAQMD does not hold American Brass & Iron accountable for the toxic emissions that rise from their business operation now and in the future.

Our 5000 member congregation at Allen Temple Baptist Church has served East Oakland for 93 years. Our members live close enough to AB&I to smell its toxic odors day and night. Our community will not benefit from an increase in these in these fumes; they must be reduced and eventually eradicated if health issues are more important than business revenues. We will not benefit from the symbolic reduction of foul odors while odorless toxins are also being produced and inhaled. Your draft regulations in Rule 12-13 are weak and seemed more concerned about hardships to AB&I's profit margins than community health and safety now and in the future.

We have the belief in our faith tradition that human beings were created to protect the earth because we believe that "…The Earth is the Lord's and the fullness thereof, the world, and they that dwell therein"…As Director of the Prophetic Justice Ministry I urge you to rethink the easy regulations that you are placing before AB&I and consider our ongoing public health problems in East Oakland that rise from having to breathe filthy dust filled air that is filled with carcinogens.

Sincerely,

//Rev. Daniel Buford//

Director, Prophetic Justice Ministry, ATBC

Acta Non Verba:

Youth Urban Farm Project

MAIL
P.O. Box 22944
Oakland, CA 94609

PHONE
510.972.FARM (3276)

E-MAIL
info@anvfarm.org

WEB
www.anvfarm.org

Victor Douglas
BAAQMD
939 Ellis Street
San Francisco, CA 94109
vdouglas@baaqmd.gov

March 28, 2013

RE: Comments on Rule 12-13 (Metal Melting and Processing Operations)

Dear Mr. Douglas:

As a stakeholder of East Oakland working close to the facility, American Brass & Iron (AB&I), I write to express my concern regarding the Air District's proposed Rule 12-13. East Oakland is already overburdened by a disproportionate impact of pollution from the operation of facilities such as AB&I. Although I appreciate the District's efforts in developing solutions included in the draft regulation, I was shocked to learn how weak the draft regulation would prove to in fact decrease emissions of harmful pollutants.

Your presentation to the Stationary Source Committee on March 18, 2013 detailed that the regulation would produce community benefits in the form of reducing health risks and decreasing odors. I am pleased by your inclusion of this concept in the draft rule, but without strict emissions limits in the actual final regulation, I, as a community member, am not satisfied that the regulation will actually achieve these community benefits for two reasons.

First, the draft rule only requires facilities such as AB&I to describe the facility's current or planned practices for minimizing emissions. There are no actual emissions limits, and only describing how a facility continues to harm us does not get us anywhere closer to reducing health risks.

Second, the draft regulation fails to address non-odorous toxics known to be emitted, such as sulfur compounds, dust and smoke. Please do something about these pollutants – they are poisoning our community.

I understand the District's concern that pollution controls may be expensive. However, I do not understand why the District is more concerned with a facility's costs in including such pollution controls, rather than, and at the expense of, my community's health. Clean jobs and environmental concerns can co-exist, and the District should spend more time to achieve that balance. To simply dismiss one in favor of the other without a fuller analysis is a serious mistake.

Sincerely,

Kelly D. Carlisle
Founder, Executive Director
Acta Non Verba: Youth Urban Farm Project
www.anvfarm.org
Ph:510.972-3276

EnCompass Academy
Teaching to the Whole Child
1025 81st Ave. Oakland, CA 94621 Tel. 510-639-3350 Fax 510-639-3352

Victor Douglas
BAAQMD
939 Ellis Street
San Francisco, CA 94109
vdouglas@baaqmd.gov

March 2013
RE: Comments on Rule 12-13 (Metal Melting and Processing Operations)

Dear Mr. Douglas:

As a stakeholder of East Oakland living close to the facility, American Brass & Iron (AB&I), I write to express my concern regarding the Air District's proposed Rule 12-13. East Oakland is already overburdened by a disproportionate impact of pollution from the operation of facilities such as AB&I. Although I appreciate the District's efforts in developing solutions included in the draft regulation, I was shocked to learn how weak the draft regulation would prove to in fact decrease emissions of harmful pollutants. I am the principal of one two schools on a shared campus down the street from the foundry, serving over 550 pre-K through 5th grade students. We often smell the emissions of the foundry. The developmental vulnerabilities of this age group calls for more rigorous regulation. In our 9 years as a school, I have also seen a increased number of children with asthma needs that require medication dispensation at school.

Your presentation to the Stationary Source Committee on March 18, 2013 detailed that the regulation would produce community benefits in the form of reducing health risks and decreasing odors. I am pleased by your inclusion of this concept in the draft rule, but without strict emissions limits in the actual final regulation, I, as a community member, am not satisfied that the regulation will actually achieve these community benefits for two reasons.

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Sincerely,

Minh-Tram Nguyen , Principal

COMMUNITIES FOR A
BETTER
ENVIRONMENT

Victor Douglas
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
vdouglas@baaqmd.gov

March 29, 2013

RE: Comments on Rule 12-13 (Metal Melting and Processing Operations) and associated Negative Declaration

Dear Mr. Douglas:

CBE is an environmental health and justice organization, promoting clean air, clean water and the development of toxin-free communities. CBE works for social justice by helping low income communities of color to self-empower by offering assistance with organizing, science/research and law. Urban communities where CBE members live and work are bombarded by pollution from freeways, power plants, oil refineries, seaports, airports, and other industrial pollution sources. The people who live in these areas suffer from very high rates of asthma and respiratory illnesses, heart problems, cancer, low birth weight, and miscarriages. Traditionally, these communities lack the power to change siting and operation decisions concerning polluting facilities. In California's Bay Area, CBE organizes in East Oakland and Richmond.

CBE is particularly concerned with the significant weakening of the District's Proposed Regulation 12, Rule 13, regulating foundry and forging operations (Rule 12-13) from the much-needed rule the District proposed in 2011. Many of CBE's East Oakland members live and breathe around a foundry in East Oakland, AB&I. Many of these members have children who attend Acorn Woodland or Encompass Academy elementary schools, a few blocks from AB&I. Our East Oakland members report that, for many years, AB&I has been imposing pollution and nuisance odors on them. As now proposed, Rule 12-13 purports to regulate and reduce the harmful and toxic emissions coming from, among other facilities, AB&I. Although CBE commends the District's efforts to include specific emissions limits in its June 2011 Draft Rule 12-13, the elimination of those limits in the current Proposed Regulation guts the rule. The current

proposed Rule 12-13 does not comply with the District's 2010 Clean Air Plan, will produce a significant and negative effect on the environment, and is overall too vague to allow satisfactory public, or even District, participation to ensure these facilities achieve emissions controls.

Draft Rule 12-13 Conflicts with the District's 2010 Clean Air Plan

On September 15, 2010, the Air District Board of Directors adopted the final Bay Area 2010 Clean Air Plan (CAP). The CAP provides an integrated, multi-pollutant strategy to improve air quality and protect public health. In particular, the CAP provides the District's control strategy to reduce particulate matter (PM) and air toxics by establishing emission control measures.

The District has stated that Rule 12-13 will implement control measure SSM 1 of the 2010 CAP. SSM 1 provides it will "*Limit* emissions of organic compounds, fine particulates, toxic compounds, and odors from foundry operations and metal melting facilities." (emphasis added) In discussing the CAP Performance Objectives, the District notes its goal to reduce $PM_{2.5}$ exposure by 10% by 2015: District staff "recognize the need to make all feasible efforts to reduce PM emissions and exposures to the greatest extent possible."

The June, 2011 draft proposed rule did, in fact, represent a "feasible effort to reduce $PM_{2.5}$ and emissions" as well as toward reducing other pollutants that endanger our community. That rule contained both emissions limits and a provision for community benefits agreements. The combination of these two elements would limit and reduce $PM_{2.5}$ emissions and exposures, as well as the other pollutants identified in SSM 1.

By contrast, Draft Rule 12-13 now only requires an Emissions Minimization Plan (EMP) that neither defines "minimization" nor imposes any specific emissions limits. Draft Rule 12-13 simply reads: "(the facility) shall 'develop an EMP that details management practices, measures, equipment and procedures that are employed or are scheduled to be implemented to minimize fugitive emissions of particulate matter and of odorous substances…'" Essentially, Draft Rule 12-13 only requires facilities to describe what methods they currently use, and what methods they shall use at some unspecified point in time in the future to minimize, whatever that means, PM and odorous substances.

Draft Rule 12-13 has effectively lost the substance of, and fails as an implementation of, SSM 1 of the CAP for two distinct reasons. First, several organic and toxic compounds do not have odors. These non-odorous substances continue to pollute the environment surrounding our East Oakland residents and are left unaddressed by Rule 12-13. Second, a mere description of current and proposed practices to minimize emissions, let alone without a definition of minimize, will not change the status quo. In this rulemaking process, industry has already made its position very clear: it is wary of

any regulation that will increase costs. The District responded by removing any mandate of any further control technology or strict emissions limits. The logical outcome is simply that there will be *no change* in emissions of particulate matter or odorous substances without mandated changes in practice or control technology. CBE joins West Berkeley Alliance for Clean Air and Safe Jobs, Bay Area Healthy 880 Communities-SL, West Oakland Air Monitors, Global Community Monitor, Bayview Hunters Point Community Advocates and GreenAction in acknowledging the need for good union jobs, but at the same time, rejecting the notion that regulation is bad for the economy. When public health suffers, the economy also suffers.[1]

The District may hang its hat on the fact that the EMP is subject to the approval of the APCO, suggesting that Draft Rule 12-13's EMP approval mechanism would cure any errors/ensure satisfactory minimization of emissions. However, as discussed below, the vague provisions of Draft Rule 12-13 that address approval of the EMP will prove similarly ineffective.

Draft Rule 12-13 Will Have a Significant and Negative Effect on the Environment

CBE commends the District for conducting a Socio-Economic Impacts analysis of the adoption of Rule 12-13 pursuant to California Health and Safety Code § 40728.5. That analysis, however, seems to suggest that emissions control measures in an EMP would only be required to the extent they are below 10 percent of a facility's profit. Specifically, the "analysis … calculates the compliance costs as a percentage of profits to determine the level of impact. BAAQMD uses the ARB's 10 percent threshold as a proxy for burden." However, and related to the need for a case by case analysis by the District as illustrated below, as data becomes available at inspection and analysis of each individual foundry at the EMP approval stage proposed by Draft Rule 12-13-405.5, it is imperative that the District perform a more comprehensive and facility specific socio-economic impact analysis in deciding whether to approve a facility's EMP. To be clear: CBE does not agree with the use of 10 percent of facility profit as a proxy for whether emission measures are feasible.

While it correctly concludes that the Proposed Rule's contemplated EMPs will not impose an unreasonable cost on individual facilities or the region as a whole, the Socio-Economic Analysis lacks any assessment of the cost of failing to address pollution from these facilities. The dollar costs of excess $PM_{2.5}$ and pollutants are astronomical, even looking solely at the costs of diagnosed illness. The District should further consider this fundamental cost of pollution, if not at the Rulemaking stage, certainly at the EMP approval stage as outlined below.

[1] As discussed below, public health impacts' effects on the local economy must be evaluated along with costs to individual facilities of pollution controls.

Draft Rule 12-13's Approval/Enforcement and Public Participation Requirements Must be Strengthened

CBE is concerned that meaningful public participation is not clearly preserved in the process of review and approval of the EMP effectively cuts out any meaningful public participation. Also problematic, the approval mechanism suggested by Draft Rule 12-13 does not clearly provide that the District has the final say in approving or disapproving a final EMP. Draft Rule 12-13 requires:

- The facility submits the proposed EMP to the District. (Draft Rule 12-13-404.1)
- The District then has discretion to require the inclusion of additional information to clarify current or future minimization procedures. (Draft Rule 12-13-404.1)
- The District will make the EMP available for public comment for at least 30 days. (Draft Rule 12-13-405.2)
- The District will release recommendations regarding the EMP, based upon public comments and District review. (Draft Rule 12-13-405.3)

Although the above regulatory scheme allows for public participation, it risks being illusory. The general public does not have the technical expertise to interpret the workings of a foundry; to decipher what would be the best control technology or even, know what measures would effectively limit emissions. Further, the only requirements of the District for the approval of the EMP (Draft Rule 12-13-405.5) is to ensure that the EMP includes an adequate description of processes (Draft Rule 12-13-402), includes the correct formulaic contents (Draft Rule 12-13-403), and either accepts all recommendations of the District, or rejects them with an explanation (Draft Rules 12-13-405.3 and 405.4). What this means is that a facility can listen to public comment, receive the District's recommendations, provide some explanation why it is not incorporating those recommendations, and then receive its final, approved EMP. Interpreted this way, not only does Draft Rule 12-13 effectively shuts out the public on the basis of technical knowledge, but even if the public could somehow receive that technical knowledge, the Draft Rule renders any public comment meaningless. The same applies to District Recommendations: Draft Rule 12-13-405.2 *requires* the District to approve an EMP provided that the facility includes explanations for not adopting those recommendations. It is foreseeable that facilities with the final say over the contents of their EMP will choose not to include measures that will bring about the pollution reductions the community needs.

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Therefore, CBE Proposes the Following Recommendations to Draft Rule 12-13:

1. Draft Rule 12-13 must include its own specific emissions limits

In its Socio-Economic Impact Study, the District notes:

> Rule 12-13 would contain no emissions limits. The District would rely upon the emissions limits *already contained* in Regulation 11: Hazardous Pollutants, Rule 15: Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting and applicable federal rules (NESHAPs) that affect metal melting operations. (emphasis added).[2]

Adoption of limits in a new rule, intended to decrease emissions, by reference to a report produced to address socio-economic impacts is flawed in itself. Even more so, the reference, and reliance upon, already existing standards established in 1994 adds nothing to reducing emissions from their current level. The wording of Draft Rule 12-13 does nothing more than legitimize the status quo. Draft Rule 12-13 lacks any teeth to reduce any emissions from their current level. The goal, as called for in SSM 1, to limit emissions of pollutants from foundries will only result from specific emissions limits in the actual and final Rule 12-13.

2. Draft Rule 12-13 must require consideration of more criteria pollutants in the EMP

As noted above, Draft Rule 12-13 only regulates particulate matter and odorous substances. Foundries release several other harmful contaminants; unless Draft Rule 12-13 is improved to include analysis and limitations of those other pollutants, those foundry emissions will remain unregulated.

3. Draft Rule 12-13 must improve its EMP approval mechanism

As illustrated above, the proposed District approval mechanism for an EMP is flawed. This problem can be cured by adopting *both* of the following safeguards:

(i) There must be an additional analysis at the EMP approval stage

The District's Socio-Economic Impact Report highlights several compliance measures by which a facility can decrease emissions.[3] The District analyzes the cost-effectiveness of these measures in accordance with the Air Resources Board's 10 percent

[2] District Regulation 11, Rule 15 adopted in 1994.
[3] *See* Socio-Economic Impact Study, *available at:* http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/Public%20Hearings/2013/1213_0604_socio_030713.ashx?la=en, at 16

threshold as a proxy for burden.[4] The results were varied, showing that some measures would be below, while others would be above that threshold. As described above, CBE disagrees with the 10 percent figure as a way to judge whether a measure is feasible for a particular facility. Although the Socio-Economic Impact Report could not draw specific conclusions tailored to specific facilities, due to each facility having a different revenue/cost makeup, its generalized conclusions do not need to apply at the EMP approval stage. It is within the District's plenary authority to perform a case-by-case analysis of each of the five facilities affected by Rule 12-13. This case-by-case analysis will ensure a proper consideration of both pollution control costs and the pollution costs to public health and the environment.

In particular, in doing these case-by-case analyses, the District must consider the cost to the community of the facility's emissions over time, and compare those to the one time capital costs of compliance measures. For instance, the Socio-Economic Impact Analysis of Compliance Costs, Case Study 2 cites upgrading PM10 Emissions Capture and Control Systems to have a capital cost of $193,000, with annual operating costs of $267,000. Whilst the initial capital cost is unavoidable, in order to properly consider compliance costs, especially considering accounting factors such as depreciation, that cost will not recur annually, but will be a fraction added to annual operating costs. The District should not shift the burden of proving financial inability to meet compliance costs to the facility; instead, the District should request all necessary information from each of the five facilities, in order for the District to perform its own case-by-case assessment of feasibility of control measures.

(ii) The District must have the final say over the approval of an EMP

The above-suggested case-by-case methodology would prove futile without improvements to Draft Rule 12-13's final approval mechanism. As highlighted above, the District's proposed EMP approval mechanism is triggered by Draft Rule 12-13-405.5, with submission of the EMP by the facility to the District. However, the proposed EMP approval mechanism ends with Draft Rule 12-13-405.4: a facility can either accept all of the District's recommendations, or accept some and provide reasons for not accepting others. In effect, the facility gets the final say. This regulatory flaw is emphasized by Draft Rule 12-13-405.2: the District *will* approve an EMP that complies with 12-13-405.4, allowing the facility the final say. The District should clarify this fundamental regulatory ambiguity, and ensure that the District has the final say over whether to approve an EMP. Draft Rule 12-13 could simply allow a facility to reject all of the District's recommendations, and as long as the facility provides an explanation as to why, the District *will* approve the EMP. At a minimum, Draft Rule 12-13 must be amended to clarify the District's plenary authority to reject a facility's explanation and instead

[4] Where Annualized compliance costs resulting in profit losses of 10 percent or more indicate that the proposed compliance measure has the potential for significant adverse economic impacts. Conversely, there would be no significant adverse economic impacts of compliance measures resulting in profit losses of less than 10 percent.

implement specific District recommendations, as identified by the case-by-case methodology illustrated above.

CBE urges the District to consider these urgent recommendations. CBE commends the District for its significant effort in this rulemaking process. However, without the above protections and additions, Draft Rule 12-13 simply proves too weak to protect the environment and public health of our members in East Oakland. Thank you for your consideration.

In Health,

/s/

Roger Lin
Staff Attorney
Communities for a Better Environment

Pacific Steel Casting Company
1333 SECOND STREET BERKELEY, CALIFORNIA 94710 510-525-9200

March 29, 2013

Mr. Victor Douglas, Planning Rules and Research Division
Bay Area Air Quality Management District (BAAQMD)
939 Ellis Street
San Francisco, CA 94109

RE: Oppose Unless Amended *BAAQMD Draft Regulation 12, Rule 13: Foundry and Forging Operations*
Oppose *BAAQMD Amended Regulation 2, Permits, Rule 1, General Requirements*

Dear Victor:

Pacific Steel has worked closely with The California Metals Coalition (CMC) and provided input to CMC positions concerning the proposed Regulation 12, Rule 13: Foundry and Forging Operations, and BAAQMD Amended Regulation 2, Permits, Rule 1, General Requirements. The implementation of the proposed new regulations will significantly impact Pacific Steel, and the 530 people employed by Pacific Steel. Therefore, Pacific Steel believes that reemphasizing CMC positions and the reasons for Pacific Steel's agreement with those positions should be heard by the BAAQMD Staff.

Pacific Steel joins with CMC and urges the BAAQMD to take the following actions on the matters being considered at the April 17, 2013 Board of Directors Meeting. (1) Enact with CMC-proposed amendments *Regulation 12 Miscellaneous Standards of Performance, Rule 13 Foundry and Forge Operation.* (2) Reject or postpone *Amended Regulation 2, Permits, Rule 1, General Requirements;* and (3) Make corrections to the February 2013 Staff Report for *BAAQMD Regulation 12, Rule 13: Foundry and Forging Operations* and *BAAQMD Regulation 6, Rule 4: Metal Recycling and Shredding Operations*.

Pacific Steel, a member of the CMC, has been an active participant since 2010 on the regulations being proposed for approval on April 17, 2013. Pacific Steel, joining with the CMC, thanks you for the opportunity to comment on these separate matters.

- **Proposed Amendment for Rules 12-13 and 6-4 to More Accurately Define Minimization**

Both *Regulation 12 Miscellaneous Standards of Performance, Rule 13 Foundry and Forge Operations (12-13-220)* and *Regulation 6 Particulate Matter, Rule 4 Metal Recycling and Shredding Operations (6-4-207)* contain a new definition for "*Minimization: the reduction to the*

smallest amount." If there is no additional wording for this new definition, and it is taken for how it is written, then the smallest number is zero. Zero fugitive emissions or zero odor emissions is unachievable, and does not correspond with the rule language. CMC strongly suggests that the definition of "Minimization" be changed in both rules to read: "The reduction to the smallest amount, based on technical and economic feasibility." The staff report (Page 35) echoes CMC's suggested minimization definition stating that "*the District would consider the proposed plan and any comments submitted by the public and may make recommendations – based on technical and economic feasibility and taking into consideration worker health and safety practices – for further revisions to the EMP by the facility to reduce or prevent fugitive emissions.*" Also, sections 6-4-405 and 12-13-405.3 describe recommendations to the Emission Minimization Plan as requiring "*additional processes or procedures to further reduce or prevent fugitive emissions...based on technical and economic feasibility.*" CMC strongly suggests making this definition change.

Pacific Steel believes that definitions which are vague can be misinterpreted during the implementation of the regulation. Enhancing the definition, as suggested above, provides for consistent implementation and enforcement of the regulation.

- **Proposed Elimination of 12-13-301.2 to Avoid Unnecessary Complications**

A major aspect of both proposed regulations (12-13 and 6-4) is the interaction between the facility, the BAAQMD APCO, and the public on the EMP. Both the public and the BAAQMD have opportunities to directly comment on the facility plans. The facility then has to opportunity to accept or refute these suggestions. CMC believes that while it is helpful to have 30-day requirements (and up to 90 days for the public), the reality is that 30 days are very tight timelines for any regulatory issue. Moreover, when the situation comes where the APCO introduces a recommendation that the facility refutes, this will likely take additional time due to technical and economic feasibility reviews. To arbitrarily place a specific timeframe in rule 12-13-301.2 "*Thirty days following the disapproval of the EMP by the APCO, the owner or operator of a foundry or forge shall be in violation of this section*" unnecessarily complicates a process where additional time may be needed to effectively establish an EMP. Including an automatic violation trigger, based on 30 days, is unneeded and should be removed. The approval process in 12-13-405 clearly dictates the process and requirements of the regulation. Pacific Steel agrees with the CMC as stated.

- **Unclear Direction and Need for Amended Regulation 2: Permits, Rule 1: General Requirements**

1. The proposed wording in *Regulation 2: Permits, Rule 1: General Permits* is poor and unclear. It appears that the intent was to exempt certain processes, but the rule as worded would cover related processes simply because heat is applied. The reference to "yielding" phenol at "0.25% by weight of sand" is, at best, confusing as well. Yielding requires additional testing, reporting and review for finished cores and molds, which adds expense and is unnecessary. Different interpretations of resin content vs. free phenol content, or a blending of other material sources further complicates matters as well.

2. Concerns of odor and emissions are adequately addressed without changing this regulation. Enforcement and potential fines are currently in place. Moreover, the regulation being proposed (12-13) by BAAQMD staff directly encompasses the sources of concern within Regulation 2. The Emissions Reduction Plan (EMP) will include facility review and potential changes to address odors and fugitive emissions at a foundry or forge facility. Amending Regulation 2 adds additional costs and layers of bureaucracy, but does not provide any additional benefits.

3. There are no odor or emission reductions cited in the February 2013 staff report to support a change to Regulation 2. Staff reasoning is simply "*Because some of these machines, specifically those using heat to produce the shell cores and molds, are sources of emissions of PM and odorous substances and would be regulated under proposed Rule 12-13, their exemption from permit requirements should be removed.* (Page 36)" In fact, the staff report confirms CMC's position that potential emissions would already be further regulated in Rule 12-13.

4. CMC strongly urges the BAAQMD Board of Directors to reject the proposed amendment of Regulation 2 unless staff provides more balanced and transparent language, reasoning for why current rules (and proposed rule 12-13) are inadequate, and what benefit would be achieved by making this change. Or at the very least, postpone a decision until the facilities submit the EMP that covers these sources, and the BAAQMD has a chance to review the effectiveness of the EMP.

Pacific Steel agrees that the emissions from these sources are adequately addressed in proposed Rule 12-13. The emissions are also addressed and operational controls are in place to regulate emissions from these sources, for facilities such as Pacific Steel, which operate under a Synthetic Minor Operating Permit. Amending Regulation 2 does not provide any additional benefits.

- **Staff Report Must Be Amended to Address Inconsistencies and Misleading Information**

Pacific Steel and CMC are very sensitive to how data is collected and presented to the BAAQMD Board of Directors and public. Accuracy, backed by science, as well as a balanced arrangement of information is very important. The February 2013 staff report, released on March 7, 2013, includes calculations and assumptions that are potentially misleading to the BAAQMD Board of Directors and public. The CMC comments include multiple inaccurate data sources throughout the February 2013 staff report.

Pacific Steel also noted the inaccuracies and submitted comments to staff on March 26, 2013, related to Pacific Steel specific data. Pacific Steel has begun talks with BAAQMD staff concerning this matter and is hopeful that the staff report will be amended to reflect accurate emission data related to Pacific Steel. Pacific Steel has a Synthetic Minor Operating Permit (SMOP). The SMOP includes Federally enforceable throughput limits on Pacific Steel which limit the criteria pollutants, including PM. The staff report emission data reports PM emissions significantly above Pacific Steel SMOP permit levels. This data is not feasible and is inaccurate. Pacific Steel has made great strides towards reducing and eliminating the potential sources for fugitive emissions. Grossly overstating the actual emissions from Pacific Steel can negatively impact Pacific Steel's standing in the community and corrections are required so as to not mislead the public. The CMC comments outline a number of other data inaccuracies in the staff report. Pacific Steel agrees with the CMC comments as stated and is hopeful that data inaccuracies will be addressed during ongoing talks with BAAQMD staff.

- **Conclusion**

Pacific Steel agrees with the CMC conclusion that the BAAQMD cannot lose sight of the fact that metalworking companies are currently under the nation's strictest requirements for emissions. More importantly, our total emission numbers are fractions of a percent of the total pollution impacting those residing in the BAAQMD jurisdiction. In addition, recently Pacific Steel has realized a significant reduction of PM and odorous substances, by incorporating a District approved Odor Management Plan into their operation and maintenance plans. The OMP's focus is on fugitive emissions, similar to the focus of proposed Rule 12-13. Pacific Steel

along with CMC has been both active and willing during the last 3 years of rulemaking. But as California faces a jobless economic recovery, the BAAQMD must be prudent in where we all focus our finite resources. Emission reduction calculations must be precise and irrefutable. Facility modifications must be both economic and technologically feasible. Material changes have to be based on the best options available, without risking the viability of a company. Finally, the need to recycle metal and to make components from metal products will not go away---let's make sure it is done locally and with the top emission control measures.

Sincerely,

David Polvi

CALIFORNIA METALS COALITION

Main Office and Mailing Address: 2971 Warren Lane El Dorado Hills, CA 95762
Lobbying Office: 1215 K Street, 17th Floor, Sacramento, CA 95814
Phone: 916-933-3075 Fax: 916-933-3072
Web Site: www.metalscoalition.com Email: staff@metalscoalition.com

March 29, 2013

Mr. Victor Douglas, Planning Rules and Research Division
Bay Area Air Quality Management District (BAAQMD)
939 Ellis Street
San Francisco, CA 94109

RE: **Oppose Unless Amended *BAAQMD Draft Regulation 12, Rule 13: Foundry and Forging Operations***
Oppose Unless Amended *BAAQMD Draft Regulation 6, Rule 4: Metal Recycling and Shredding Operations*
Oppose *BAAQMD Amended Regulation 2, Permits, Rule 1, General Requirements*

Dear Victor:

The California Metals Coalition (CMC) strongly urges the BAAQMD to take the following actions on the matters being considered at the May 1, 2013 Board of Directors Meeting. (1) Enact with CMC-proposed amendments *Regulation 12 Miscellaneous Standards of Performance, Rule 13 Foundry and Forge Operation.* (2) Enact with CMC-proposed amendments *Regulation 6 Particulate Matter, Rule 4 Metal Recycling and Shredding Operations* (3) Reject or postpone *Amended Regulation 2, Permits, Rule 1, General Requirements;* and (4) Make corrections to the February 2013 Staff Report for *BAAQMD Regulation 12, Rule 13: Foundry and Forging Operations* and *BAAQMD Regulation 6, Rule 4: Metal Recycling and Shredding Operations*.

As background, California is home to nearly 6,000 metalworking facilities, employing over 210,000 Californians with high-paying manufacturing jobs and health benefits. 8 out of 10 employees in the metalworking sector are considered ethnic minorities or reside in communities of concern.

This important industry manufactures metal components for electric cars, solar panels, medical devices, aerospace, infrastructure, drinking water systems, semiconductor, national defense, and thousands of other applications. Our metalworking products and services are a direct reflection of the innovation and hard-work put forth by California's workforce and business leaders.

Californians discard over 2,000,000 tons of metal each year. California's metalworking industry not only uses recycled materials to produce our products, but we employ recycling and zero waste practices in our facilities. Recycling reduces air emissions and "it is virtually beyond dispute that manufacturing products

from recyclables instead of from virgin raw materials causes less pollution and imposes fewer burdens on the earth's natural habitat and biodiversity."[1]

CMC has been an active participant since 2010 on the regulations being proposed on May 1, 2013. On behalf of the California Metals Coalition (CMC), we thank you for the opportunity to comment on these separate matters.

- **Proposed Amendment for Rules 12-13 and 6-4 to More Accurately Define Minimization**

Both *Regulation 12 Miscellaneous Standards of Performance, Rule 13 Foundry and Forge Operations (12-13-220)* and *Regulation 6 Particulate Matter, Rule 4 Metal Recycling and Shredding Operations (6-4-207)* contain a new definition for "*Minimization: the reduction to the smallest amount.*" Just hours before these comments were due, staff changed this definition to "*Minimization: the reduction to the smallest possible amount*." If there is no additional wording for this new definition, and it is taken for how it is written, then the smallest possible number is zero. This impossible standard goes beyond any previous discussions for emission reductions, and establishes limits that cannot be supported. Simply put, zero fugitive emissions or zero odor emissions is unachievable, and does not correspond with the current rule language. The staff report (Page 35) states that minimization requires "*the District would consider the proposed plan and any comments submitted by the public and may make recommendations – based on technical and economic feasibility and taking into consideration worker health and safety practices – for further revisions to the EMP by the facility to reduce or prevent fugitive emissions*." Also, sections 6-4-405 and 12-13-405.3 describe recommendations to the Emission Minimization Plan as requiring "*additional processes or procedures to further reduce or prevent fugitive emissions...based on technical and economic feasibility*." CMC strongly suggests that the definition of "Minimization" be changed in both rules to read: "The reduction to the smallest possible amount, based on technical and economic feasibility." Without this change, CMC strongly opposes both regulations.

- **Proposed Elimination of 12-13-301.2 and 6-4-301.2 to Avoid Unnecessary Complications**

A major aspect of both proposed regulations (12-13 and 6-4) is the interaction between the facility, the BAAQMD APCO, and the public on the EMP. Both the public and the BAAQMD have opportunities to directly comment on the facility plans. The facility then has to opportunity to consider including suggestions in the final EMP. CMC believes that while it is helpful to have established timeframes in the regulations, the reality is that 30 days are very tight timelines for any regulatory issue. In fact, the only additional time provided in the rule is granted to public review (up to 90 days). To arbitrarily place a specific timeframe on the facilities that reads: "*Thirty days following the disapproval of the EMP by the APCO, the owner or operator of a foundry or forge shall be in violation of this section*" unnecessarily complicates the process. It is unclear whether a violation is triggered when the APCO finds deficiencies or errors in the EMP and disapproves it. It is unclear whether a violation is triggered if the APCO and facility disagree on proposed changes to the EMP and require more than 30 days to resolve. It is unclear whether a violation is triggered

[1] *Too Good to Throw Away*, Natural Resources Defense Council (http://www.nrdc.org/cities/recycling/recyc/chap1.asp)

when corrections are required and disapproval is used. It is unclear how the violation trigger will be applied when the review and modification of an EMP occurs; this is especially confusing if there are more than one violation or permit change that re-opens the EMP and overlapping reviews are being conducted by the APCO. BAAQMD's inclusion of an automatic violation trigger when there are multiple opportunities and situations for "disapproval" is fraught with challenges. The approval process in both rules clearly dictates the process and requirements of the regulation. As such, CMC opposes both rules unless 301.2 is deleted.

- **Unclear Direction and Need for Amended Regulation 2: Permits, Rule 1: General Requirements**

1. The proposed wording in *Regulation 2: Permits, Rule 1: General Permits* is poor and unclear. It appears that the intent was to exempt certain processes, but the rule as worded would cover related processes simply because heat is applied. The reference to "yielding" phenol at "0.25% by weight of sand" is, at best, confusing as well. Yielding requires additional testing, reporting and review for finished cores and molds, which adds expense and is unnecessary. Different interpretations of resin content vs. free phenol content, or a blending of other material sources further complicates matters as well.

2. Concerns of odor and emissions are adequately addressed without changing this regulation. Enforcement and potential fines are currently in place. Moreover, the regulation being proposed (12-13) by BAAQMD staff directly encompasses the sources of concern within Regulation 2. The Emissions Reduction Plan (EMP) will include facility review and potential changes to address odors and fugitive emissions at a foundry or forge facility. Amending Regulation 2 adds additional costs and layers of bureaucracy, but does not provide any additional benefits.

3. There are no odor or emission reductions cited in the February 2013 staff report to support a change to Regulation 2. Staff reasoning is simply "*Because some of these machines, specifically those using heat to produce the shell cores and molds, are sources of emissions of PM and odorous substances and would be regulated under proposed Rule 12-13, their exemption from permit requirements should be removed.* (Page 36)" In fact, the staff report confirms CMC's position that potential emissions would already be further regulated in Rule 12-13.

4. CMC strongly urges the BAAQMD Board of Directors to reject the proposed amendment of Regulation 2 unless staff provides more balanced and transparent language, reasoning for why current rules (and proposed rule 12-13) are inadequate, and what benefit would be achieved by making this change. Or at the very least, postpone a

decision until the facilities submit the EMP that covers these sources, and the BAAQMD has a chance to review the effectiveness of the EMP.

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- **Staff Report Must Be Amended to Address Inconsistencies and Misleading Information**

CMC is very sensitive to how data is collected and presented to the BAAQMD Board of Directors and public. Accuracy, backed by science, as well as a balanced arrangement of information is very important. The February 2013 staff report, released on March 7, 2013, includes calculations and assumptions that are potentially misleading to the BAAQMD Board of Directors and public. They include, but are not limited to:

1. Page 2: "*Emissions of PM (both process emissions that are largely abated and fugitive emissions) from foundries and forges are estimated to be 213 tons per year (tpy).*" At the July 2012 BAAQMD public workshops in Oakland and Redwood City, emissions for foundry and forges were discussed. At the workshop, it was discussed that the industry accounts for one-tenth of one-percent of total PM emissions in the District. The number given by District staff for PM was 72 tons per year. The data presented by BAAQMD staff (Table 10) appears as if foundry and forges emissions tripled to 213 tons per year. Additionally, CMC believes that the largest PM emissions cited in Table 10 are too high, which would make the 213 total inflated.

2. Page 2: "*staff estimates fugitive emissions to be 129.4 tpy."* Again the total PM emissions for the foundry and forging industry was 72 tons per year in July 2012 and now the fugitive PM emissions alone equates to nearly double at 129.4 tons per year? Table 10, as currently shown, is deceptive to anyone not trained in emissions data collection and calculations.

3. Page 2: "*Staff estimates that reductions of fugitive emissions due to the implementation of proposed Rule 12-13 would be about 13 tpy*." Since the largest PM emissions cited in Table 10 are questionable, the assumption of overall reductions should also be questioned.

4. Page 2, footnote: "*Engineering analyses of two foundries indicate that fugitive emissions of PM ranged between 60 and 85 percent of the total (abated and fugitive) PM emissions. 60% has been used to estimate fugitive emissions from the remaining foundries subject to this rule. Emissions from permitted equipment are calculated from information reported to the District annually. The metal recycling facilities subject to this rule have few permitted equipment. The fugitive emissions from metal recycling facilities have been estimated from EPA emission factors used for similar processes*." The percentages cited by BAAQMD can be misleading because they are comparing apples and oranges. They represent fugitives (by definition these are unabated) as a percentage of the total (abated and fugitives). This calculation method actually penalizes the facilities that have high emission capture and control efficiencies and therefore lower abated emissions. By using the BAAQMD staff method of calculation, the higher the efficiency for capture and control, the greater the percentage of fugitives. In an extreme case, 100% capture and control would show that fugitives account for 100% of total emissions. Overall, this type of statement is confusing to the BAAQMD Board of Directors and public as the bulk of the emissions are controlled through District approved abatement devices.

5. Page 26: " *In two detailed analyses, the fraction of the overall emissions attributable to fugitive emissions at two foundries was found to range between 60 and 85 percent.*" As stated previously, the calculation method is misleading. A more transparent assessment in Table 10 would be to begin with the unabated emissions and compare the fugitives to the unabated amount. This would give a more accurate measure of the fugitives fraction of total emissions. Here are two examples of how the data in Table 10 should read: If a facility has unabated PM emissions of 600 tons/yr, and fugitive PM emissions of 15 tons/yr, then 15/600 = 2.5 %. If a facility has the potential to emit 2000 unabated tons of PM emissions, and fugitive PM emissions of 15 tons/yr, then 15/2000 = 0.7%. Both of these calculations should be utilized in order to provide a clear picture of fugitive emissions.

6. Page 37-39. This rule will impact thousands of employees, but the staff report underreports the number of employees at each company. As an example, CASS employs much more than 20 employees. An accurate number of employees should be provided in this public staff report.

7. Page 40. "*A District engineering analysis of PM emissions at Pacific Steel Casting indicated that fugitive emissions comprise about 65 percent of the facility's total emissions (fugitive and abated PM emissions).*" The March 26, 2013 letter sent by Pacific Steel to Victor Douglas, BAAQMD, notes that the data derived from the District analysis grossly overstates the PM emissions at Pacific Steel. District engineering analysis, based on "Grain Loading ChartRev 3 with District Flow Rates, Waymon Lee, BAAQMD, April 27, 2011, was used to estimate the PM emissions at Pacific Steel. The District appears to have used emission factors derived from facilities, minus the emission control devices that exist at Pacific Steel. This resulted in the District's estimated emissions attributed to Pacific Steel being false.

8. Page 42. "*The fugitive emissions for foundries and forges total 129.4 tons per year. EPA, in developing national rules for various industries, estimates that these kinds of plans (often referred to as Operations and Maintenance plans) reduce emissions by up to 20 percent. Staff estimates, because many potential measures have already been put into place, that implementation of proposed Regulation 12, Rule 13 could reduce emissions by at least 10%, or 13 tons per year.*" As discussed previously, CMC disagrees with the assumption that fugitive emissions for foundries and forges equate to 129.4 tons per year. Consequently, the assumption of a 13 tons per year reduction in fugitive emissions is false.

9. Page 44. " *Using a value of $75 per hour for the cost (wages and benefits) of an environmental engineer, the cost of developing an EMP would range between $750 and $3000 if done by facility personnel.*" The assumption that an approved EMP can be developed for $750 is misleading. CMC requests that the BAAQMD provide a sample EMP that can be done at this cost. Rather, since the proposed rules call for impacted facilities to first conduct a full review of their facility, including permitted and non-permitted sources, list all of the regulations impacting targeted emissions, and then document all of the advancements made at the company, this entails numerous departments, department operations and an understanding of different parts of the facility. This initial review alone will cost $4,000-$8,000, and includes multiple staff people. Costs increase when the EMP requires a review of potential changes to the

facility, potential changes to processes, potential changes to materials, potential changes to equipment, potential changes to controls, and potential changes to general operations when addressing fugitive and odor emissions. Any potential change to a manufacturing facility encompasses more than just a material or process adjustment. Also, discussion of equipment and material changes historically require outside consultants, and sometimes interruptions of production. Finally, since the EMP requires public review and BAAQMD review, it is expected that the facility will incur additional costs handling technically and economically feasible suggestions. The overall costs of the EMP can exceed $75,000, which is 100-times more than the BAAQMD staff assumptions.

10. Page 45. "*Case Study 1: Minimization of Air Drafts for Metal Finishing Operations. An enclosure of this size would cost about $25,000 based on an approximate cost of $50 per square foot of installed material.*" Case Study 1 only provides the basic construction costs for a room and ignores requirements for this area to protect the workers and capture emissions. An enclosed room, standing apart from the facility is not effective. A better assessment of Case Study 1 would be to include air flow assessments, worker safety, and needs for engineering controls or additional abatement. As such, a more accurate range for Case Study 1 would be $75,000-$150,000.

11. Page 49, 53. "*Case Study 7: Switching to Lower VOC Binder Formulation. Case Study 7 illustrated that the cost of switching from a phenol-based binder system to one with a lesser phenol content was essentially $0.*" It is confusing for the BAAQMD Board of Directors and public to see a staff report that shows annualized cost and cost effectiveness per ton for any binder change to be $0. The binder system is an integral part of any sand cast foundry and is dictated by the ability to reuse/recycle the sand, produce products at the proper temperature, maintain the integrity of the final product, and many other factors. An ineffective binder system can cause the entire sand casting and/or core making process to malfunction, which is detrimental to any foundry.

12. Page 51. " *Usually, the facility does not incur a direct cost for these (binder)evaluations; the binder manufacturer would normally underwrite the cost of the evaluation, which would be recovered in the cost of the binder.*" This statement is potentially misleading because it does not clarify which level of evaluation is being considered. Does the staff report include field trials? Does the staff report include equipment adjustments? Does the staff report include interruptions to production? Does the staff report include the time spent by facility staff to review suggestions? Without specifics of the "evaluation", assumptions could be made that there is no cost to the facility for this analysis.

- **Matrix Comparing Current Rules with Proposed BAAQMD Rules**

The February 2013 staff report includes a good review of the federal, state and local rules that include emission limits, material handling requirements, and regulations for toxic materials. CMC has taken an additional step to provide a matrix that encompasses this comparison. This matrix was done by a third party environmental firm. It is important for the BAAQMD Board of Directors and public to understand the metalworking processes and emissions already under regulation. (SEE APPENDIX A).

- **Understanding Current Emission Data and Potential Reductions**

It is imperative that industry, the BAAQMD Board of Directors, and public understand that the metals industry currently accounts for one-tenth of one percent of total emissions in the BAAQMD jurisdiction. Additionally, the proposed rules concentrate on approximately eight of the total number of metal facilities regulated by the BAAQMD. Finally, the proposed rules target odors and fugitive emissions, which are the smallest contributors to overall emissions at a metals facility. CMC still believes that the proposed plan will help clean the air within the BAAQMD. CMC still believes that the community will benefit from individual site plans that address odors. CMC and our metalworking members will continue to be an active participant in pursuing clean air goals. But fractions of a single percent are what the industry contributes to overall emissions, and fractions of fractions of a single percent are the potential reductions when discussing any rule for the metals industry.

BAAQMD Emissions Inventory: Metals Industry Comparative
Source: January and July 2012, BAAQMD

Pollutant	Metal Melting Industry (tons)	Total Stationary Sources (tons)	Mobile Sources + Misc Sources (ex: construction and farming equipment)	Metal Melting Industry % of Stationary Sources	Metal Melting Industry % of Mobile Sources	Metal Melting Industry % of Mobile and Stationary Sources
Particulate Matter (PM)	72	18,250	55,101	0.4%	0.1%	0.1%
Organics	111	45,625	41,600	0.2%	0.3%	0.1%
Oxides of Nitrogen (NOx)	86	27,740	117,530	0.3%	0.1%	0.1%
Sulfur Dioxide (SO2)	55	14,271	15,565	0.4%	0.4%	0.1%
Carbon Monoxide (CO)	313	62,962	554,428	0.5%	0.1%	0.1%

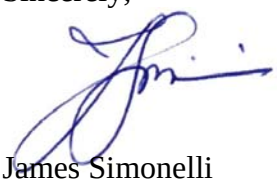
- **Conclusion**

The BAAQMD cannot lose sight of the fact that metalworking companies are currently under the nation's strictest requirements for emissions. More importantly, our total emission numbers are fractions of a percent of the total pollution impacting those residing in the BAAQMD jurisdiction. CMC has been both active and willing during the last 3 years of rulemaking. But as California faces a jobless economic recovery, the BAAQMD must be prudent in where we all focus our finite resources. Emission reduction calculations must be precise and irrefutable. Facility modifications must be both economic and technologically feasible. Material changes have to be based on the best options available, without risking the viability of a company. Finally, the need to recycle metal and to make components from metal products will not go away---let's make sure it is done locally and with the top emission control measures.

CMC and the larger metalworking industry's track record are to work openly, honestly, and constructively with regulatory agencies at the local, statewide and federal level. We continue to hold

ourselves to this high standard and will be available to work with the BAAQMD to establish solutions that achieve environmental and economic goals.

Sincerely,



James Simonelli
Executive Director

cc: Dan Belik, Henry Hilken, Susan Adams, Wayne Kino, Jean Roggenkamp, Jack Broadbent, BAAQMD Board of Directors

APPENDIX A: California Metals Coalition; Summary of Existing Regulations Affecting Foundries and Forging Operations – Federal and State

Level	Regulation	Requirement					
		Applicability	**Regulated Pollutants**	**Emissions Limits**	**Visible Emissions (Opacity) Limits**	**Control Device Requirements**	**Recycling and Waste Management**
Federal	NESHAP for Iron and Steel Foundries (EEEEE)	Applies to iron and steel foundries that are major sources	• HAPs • Metals • PM	Limits vary based on type of source and whether it is new or existing; requirements include: • gr PM/dscf • gr/dscf of total metal HAPs • lb PM/ton of metal charged • lb total metal HAP/ton metal charged • ppmv of VOHAPs	20% opacity limit (6-minute average) except for one 6-minute average per hour that doesn't exceed 27% opacity	Required to meet federal MACT standards (varies based on type of source and whether it is new or existing)	Must have written acceptance and use policy for metals that includes requirement to remove mercury switches from scrap vehicles
	NESHAP for Secondary Aluminum Production (RRR)	Applies to new and existing secondary aluminum production sources	• Dioxins • Furans • HCl • PM • THC	Limits vary based on type of source; requirements include: • gr/dscf of D/F TEQ • lb PM/ton of feed • lb THC/ton of feed • lb HCl/ton of feed	10% opacity limit from PM add-on control devices for some sources	Required to meet federal MACT standards (varies based on type of source)	
	NESHAP for Electric Arc Furnace Steelmaking Facilities (YYYYY)	Applies to large and small facilities with electric arc furnaces	• PM	Limits vary based on production rate; requirements include: • gr PM/dscf • lb PM/ton of steel	6% opacity	Required to meet federal MACT standards (varies based on type of source and production rate)	
	NESHAP for Iron and Steel Foundries (ZZZZZ)	Applies to iron and steel foundries that are non-major sources	• HAPs • PM	Limits vary based on whether source is new or existing; requirements include: • lb PM/ton of metal charged • lb total metal HAP/ton of metal charged	20% opacity limit except for one 6-minute average at 30% opacity	Required to meet federal MACT standards (varies based on whether source is new or existing)	
	NESHAP for Aluminum, Copper, and other Nonferrous Foundries (ZZZZZZ)	Applies to non-major sources with melt production of 600 tons or more	• Metals • PM	Limits vary based on whether source is new or existing; requirements include: • % control efficiency • gr PM/dscf		Required to meet federal MACT standards (varies based on whether source is new or existing)	Percent by weight restrictions for: • beryllium • cadmium • lead • nickel • manganese • chromium
	Solvent Cleaning	Applies to halogenated solvent cleaning machines which uses specific regulated compounds	• Halogenated solvents				Less than 5% by weight restrictions on halogenated solvents containing: • methylene chloride • perchloroethylene • trichloroethylene • 1,1,1-trichloroethane • carbon tetrachloride • chloroform
	Refrigerant Reclamation	Applies to all vehicles with refrigerants	• Refrigerants				Requirements to reclaim refrigerants before dismantling vehicles

	Federal Resource Conservation and Recovery Act	Applies to all hazardous waste	• Hazardous waste				Controls hazardous waste from "cradle-to-grave" (includes generation, transportation, treatment, storage, and disposal)
	National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements	Applies to point sources discharging pollutants into surface waters	• Wastewater				Numeric effluent pollutant limits for water discharges
State	California Air Toxic "Hot Spots" Program	Applies to TAC emitting facilities	• TACs	Assesses health risk and requires risk reductions			
	Airborne Toxic Control Measure (ATCM) for Emissions of Toxic Metals from Non-Ferrous Metal Melting	Applies to facilities that melt non-ferrous metals	• PM	General limits on emissions of PM and dust	Not to exceed 10% opacity limit for 3 minutes or longer in any hour	PM control device must be at least 99% effective with specific operating conditions	
	Metallic Discards Act	Applies to all metallic discards (except small amounts that are economically infeasible to separate)	• Mercury • Oil • PCBs • Refrigerants • Sodium azide				Requirement to remove materials prior to processing metal discards including: • unspent sodium azide air bag canisters • encapsulated PCBs • refrigerants • used oil • mercury switches

Abbreviations:

ATCM - Airborne Toxic Control Measure
BAAQMD - Bay Area Air Quality Management District
BACT - Best Available Control Technology
D/F - Dioxins/Furans
dscf - dry standard cubic feet
gr - grain
HAP - Hazardous Air Pollutant
HCl - Hydrochloric Acid
lb - pound
MACT - Maximum Achievable Control Technology
NESHAP - Natioanl Emissions Standards for Hazardous Air Pollutants
PCB - Polychlorinated biphenyl
PM - Particulate Matter
ppmv - parts per million by volume
TAC - Toxic Air Contaminant
TBACT - Toxics Best Available Control Technology
TEQ - Toxic Equivalents
THC - Total Hydrocarbons
VOHAP - Volatile Organic Hazardous Air Pollutants
yr - year

Note: The miscellaneous Coating MACT Subpart MMMM also applies if the facility is a major source of Hazardous Air Pollutants .

APPENDIX A: California Metals Coalition; Summary of Existing Regulations Affecting Foundries and Forging Operations – BAAQMD

Level	Regulation	Requirement					
		Applicability	**Health Risks & Permits**	**Regulated Pollutants**	**Emissions Limits**	**Visible Emissions (Opacity) Limits**	**Control Device Requirements**
Local	Regulation 1: General Provisions & Definitions	Applies to facilities emitting any contaminant to the air	Air contaminants cannot have a significant negative impact on the public and emissions must be monitored and recorded according to permit requirements	All contaminants			
	Regulation 2, Rule 1: General Requirements	Applies to facilities emitting any contaminant to the air	Must obtain permit if equipment causes or reduces air pollutants	All contaminants			Control devices must have permit describing emissions reduction measures and levels
	Regulation 2, Rule 2: New Source Review	Applies to facilities emitting any contaminant to the air	Must obtain permit if emissions limit is exceeded by new source	Criteria pollutants	>10 lbs/day of any criteria pollutant		Must install District-approved BACT if exceeds emissions limit
	Regulation 2, Rule 5: New Source Review of Toxic Air Contaminants	Applies to TAC emitting facilities	New sources require preconstruction permit review and project health risk limits are established	TACs			District-approved TBACT required for any facility installing a new source or modifying existing source of TACs
	Regulation 2, Rule 6: Major Facility Review	Applies to any facility that emits regulated pollutants	Title V permit required if emissions limits exceeded (Synthetic Minor Operating Permit limits production to keep emissions below Title V requirements)	All regulated pollutants	• 100 tons/yr of any regulated pollutant • 10 tons/yr of any single TAC • or 25 tons/yr of all TACs		
	Regulation 6, Rule 1: Particulate Matter General Requirments	Applies to any PM emitting source		PM	General limits on PM emissions	Ringelmann Chart opacity limits not to be exceeded more than 3 minutes in any hour	
	Regulation 7: Odorous Substances	Applies to any source emitting odorous substances		Odorous compounds	General and specific limits on odorous compounds		
	Regulation 11, Rule 15: Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting	Applies to facilities that melt non-ferrous metals		PM	General limits on emissions of PM and dust	Not to exceed 10% opacity limit for 3 minutes or longer in any hour	PM control device must be at least 99% effective with specific operating conditions

Abbreviations:

BACT - Best Available Control Technology
lb - pound
PM - Particulate Matter
TAC - Toxic Air Contaminant
TBACT - Toxics Best Available Control Technology
yr - year

pillsbury

Pillsbury Winthrop Shaw Pittman LLP
Four Embarcadero Center, 22nd Floor | San Francisco, CA 94111-5998 | tel 415.983.1000 | fax 415.983.1200
MAILING ADDRESS: P. O. Box 2824 | San Francisco, CA 94126-2824

Margaret Rosegay
tel 415.983.1305
margaret.rosegay@pillsburylaw.com

April 2, 2013

Victor Douglas
Principal Air Quality Specialist
Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109

Re: Comments on Bay Area Air Quality Management District Proposed Regulation 6, Rule 4, Particulate Matter, Metal Recycling and Shredding Operations

Dear Mr. Douglas:

On behalf of Schnitzer Steel Products Company and Sims Metal Management, thank you for the opportunity to submit comments on the Bay Area Air Quality Management District's ("District") proposed Regulation 6, Rule 4, dated March 2013, pertaining to the control of particulate matter from metal recycling and shredding operations. We appreciate the District's consideration of our prior comments, and believe that the rule, as now structured, represents a reasonable approach to regulation of these types of facilities. Our remaining comments are directed primarily to clarification of language and certain corrections to ensure that the rule, as adopted, and the Staff Report accurately describe the covered operations.

To facilitate your review of our comments, we have provided a Word version of the rule with TrackChanges showing our suggested revisions.[1] We have also made minor editorial and typographical corrections where noted.

[1] The mark-up is based on the District's March 2013 draft and includes the revisions made by the District.

Applicability: Auto Dismantling Facilities

Based on recent communications with District staff, we understand that the District intends auto dismantling facilities that have a metal throughput of 1,000 tons or more per rolling 12-month period to fall within the scope of the rule. See Section 6-4-102 (Applicability) and Section 6-4-205 (definition of "Metal Recycling Facility"). However, under Section 6-4-104.2, as proposed by the District, auto dismantling facilities of any throughput "that do not conduct shredder operations, or that do not produce, receive or process scrap metal containing shredder residue," are exempt from the Emissions Minimization Plan ("EMP") requirements of the rule. Thus, auto dismantling facilities that conduct depollution operations and crush cars prior to transport to a shredder facility are subject only to the recordkeeping requirements in Sections 6-4-501 and 6-4-502, regardless of their annual metal throughput.[2] As a point of information, we are unaware of any auto dismantling facility that conducts shredding operations.

Applicability: Small Shredder Facilities

The proposed rule also appears to exempt small metal shredder facilities — i.e., those that have a metal throughput of 50,000 tons or less per rolling 12-month period — from the EMP requirements of the Rule. See Section 6-4-104.1.[3]

We do not believe small metal shredders should be exempt from the EMP requirements. These facilities have the same, if not a greater, potential to generate fugitive emissions, as they likely do not employ the same types of abatement equipment or implement Best Management Practices comparable to those implemented by large facilities. They also may not implement the same level of scrap acceptance requirements implemented by the larger shredder facilities, or treat their shredder residue in the manner approved by the Department of Toxic Substances Control. In order to ensure a level playing field among all metal shredders (large and

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[2] We note that the discussion on page 33 of the Staff Report seems to be at odds with this conclusion, where it is stated that "[t]hose recycling facilities with an annual metal throughput between 1,000 and 50,000 tons would only be required to keep records of their annual metal throughput." It is our understanding that, so long as a metal recycling facility does not conduct shredder operations or otherwise manage shredder residue, it is subject only to the recordkeeping requirements of the rule, regardless of its metal throughput.

[3] As drafted, Sections 6-4-104.1 and 6-4-104.2 are independent of each other, and facilities that fall into either category are exempt from the EMP requirements.

small, mobile and stationary), the rule should be revised to provide that all metal shredders are subject to the EMP requirements, including those that have a throughput of less than 1,000 tons in a rolling 12-month period.

Accordingly, in order to clarify the intent of the limited exemption in Section 6-4-104, and to extend the Rule to metal shredders of all sizes, we have made appropriate changes to Section 6-4-102 and Section 6-4-104, as set forth in the attached mark-up. We have also changed the description of the exemption since it is not dependent on a metal throughput of less than 50,000 tons, but rather on the lack of metal shredder operations or related handling of aggregate and shredder residue. Finally, we have clarified the definition of "Shredding Operation" in Section 6-4-213, primarily to avoid use of the word "crushing," which is associated with auto dismantling operations, not metal shredding operations.

Definition of "Minimization"

As drafted, the term "Minimization" is defined simply as "[t]he reduction to the smallest possible amount." We strongly believe this definition should be revised to reflect the concepts of economic and technical feasibility, consistent with numerous other provisions of the rule and the discussion in the Staff Report. It is not reasonable to expect that shredder facilities will ever be able to achieve zero fugitive emissions, and we are very concerned that a standard of "the smallest possible amount" will be misconstrued by the public. We also question whether there is any environmental or human health justification for requiring reduction of fugitive emissions "to the smallest possible amount." We note that the District's current regulations allow visible emissions so long as they do not create a public nuisance.

Definition of "Shredder Residue"

In our prior comments, we had requested that the District draw a distinction between the intermediate processing material known as "aggregate" and "shredder residue," which is the final residual material (or waste) that remains after all ferrous and non-ferrous metal separation and removal operations are completed. While we agree that both aggregate and shredder residue have the potential to generate fugitive emissions (and should be addressed in the EMP), it is important to distinguish between these two categories of materials since they are inherently different and are managed differently.

Fundamentally, aggregate is not a waste — it is the mixture of metallic and non-metallic materials that exists after ferrous metals have been magnetically removed from the initial shredder output. This mixture contains all of the non-ferrous metals and is considered a commodity by the industry due to its high economic value. On a

per ton basis, there is far greater economic value in a ton of aggregate as compared to a ton of shredder residue. Modern metal shredder facilities such as those operated by Sims and Schnitzer invest millions of dollars in sophisticated, "downstream" metals separation/processing equipment that is designed to remove as much of this non-ferrous metal from the aggregate stream as is economically and technically feasible.

The confusion between aggregate and shredder residue is reflected in the Staff Report, which states,

> The shredding of automobiles results in a mixture of ferrous metal and non-ferrous metal, and shredder wastes. Once shredded the ferrous metal is segregated magnetically from the mixture of non-ferrous metals and shredder waste also known as shredder residue or "fluff." This mixture can be further separated using air streams and screens to separate the lighter fluff from the heavier material containing metal.

Staff Report, Section II.E.4 (Auto and Metal Shredding), at p. 14.

A more accurate description of the process is as follows:

> The shredding of automobiles, appliances and other scrap metal results in a mixture of ferrous metal, non-ferrous metal, and non-metallic components of the shredder infeed (e.g., carpet, upholstery, glass, rubber, foam, etc.). Once the infeed is shredded, the ferrous metal is segregated magnetically from the shredder output, resulting in an intermediate process material known as "aggregate." Aggregate is a mixture of non-ferrous metals and non-metallic materials from which non-ferrous metals will be removed. This mixture is further separated using air streams, screens and other types of equipment to separate the non-ferrous metals from the non-metallic material. The largely non-metallic material remaining after all metals separation processes have been completed is known as shredder waste (also known as shredder residue or "fluff").

Similarly, Section II.E.5 of the Staff Report (Shredder Residue ("Fluff"), at p. 14) incorrectly states,

> Shredder residue and scrap metal contaminated with shredder residue are of concern because shredder residue is a source of [particulate matter] . . . Shredder residue . . . is generated at large-scale metal recycling facilities that operate shredders and hammermills. Shredder residue can also be found at large-scale regional collection sites of scrap metals. . . . There are two Bay

> Area facilities that operate shredders and one that receives shredder residue. (Emphasis added.)

See also, Staff Report, pp. 24, 25, 34, 39, where these same, or similar, statements are repeated.

This description is greatly inaccurate and reflects a fundamental misunderstanding about the nature of shredder and related operations. In the first instance, scrap metal is not "contaminated with shredder residue." Shredder residue is the waste that remains after ferrous and non-ferrous metals have been removed from the shredder output, including both the initial output (prior to removal of ferrous metals) and aggregate (following removal of ferrous metals). While the various metal products produced by the recycling process can contain very small amounts of residual non-metallic material due to the physical limitations of the metals separation technologies employed by the facilities, it is a complete misnomer to describe these incidental non-metallics as "contamination" or as "shredder residue." Ferrous and non-ferrous products produced by both Sims and Schnitzer meet industry specifications and are sold as commodities. They are not "contaminated" or off-specification in any manner, and incidental levels of non-metallics in scrap products are not shredder residue. We have suggested a revision to the definition of "Shredder Residue" to clarify this critical point.

Further, there is no facility in the Bay Area that receives shredder residue, as stated on page 14 of the Staff Report. Sims and Schnitzer each operate a single metal shredder. Within the Bay Area Sims also operates a facility in Richmond which engages in receipt, non-shredder processing (e.g., shearing) and shipment of scrap metal. Sims' Richmond yard does not receive, and never has received, shredder residue or aggregate — whether for processing or otherwise. Contrary to the statement on page 14 of the Staff Report that "shredder residue can also be found at large-scale regional collection sites" (an apparent reference to Sims' Richmond facility), there is no shredder residue at Sims' Richmond Facility and the Staff Report's statement to the contrary is erroneous. The Richmond facility receives primarily unprocessed scrap metal which it either (i) transports to Redwood City for shredding, or (ii) shears, bales or otherwise prepares for delivery to a third-party facility for loading onto ships for export. On occasion, scrap products, previously prepared for shipment, may be purchased from suppliers, or obtained from other Sims' facilities, and delivered to a third-party facility for loading onto ships for export. While it is possible that scrap commodities (processed scrap) may contain very small amounts of non-metallics as described above, it is simply inaccurate to state that the Richmond yard receives shredder residue. Accordingly, because there is no shredder at the Richmond facility, and because the facility does not receive shredder residue or aggregate, the Richmond

facility qualifies for the EMP exemption in Section 6-4-104 and is subject only to the recordkeeping requirements of the rule.

Accordingly, this section of the Staff Report and the other referenced pages need to be revised to delete the erroneous statements that (1) scrap metal can be "contaminated" with shredder residue, and (2) that there is one facility in the Bay Area that "receives shredder residue." In addition, in order to avoid mischaracterizing scrap metal recycling operations as waste management operations and unfairly tainting the products produced by this industry as "contaminated," we believe the proposed rule should be revised to include a definition of "aggregate." Our suggested definition is included in the attached mark-up of the rule. In order to ensure that processing of aggregate at shredder facilities to separate non-ferrous metals remains subject to the EMP requirements (due to its potential to generate fugitive emissions), we have included processing of aggregate within the definition of "Metal Management" in Section 6-4-204.

Public Review of EMPs

Sims and Schnitzer remain concerned about the highly public process that is envisioned around the review and approval of EMPs, including (in the proposed rule) an opportunity for a public hearing on the content of the plan. Much of the content of an EMP is likely to be classified as confidential business information and will not be available for public review in any case, and cannot fairly be made the subject of a public hearing. Redacted versions of EMPs that are suitable for review by the public will contain little detailed substantive information, and public review and comment on the general information contained in the "public" version of the EMP is not likely to add meaningfully to the development of an effective plan. We are also unclear on the purpose of a public hearing, given that the public is already entitled to submit written comments on an EMP and would be free to discuss those comments with staff.

We reiterate our earlier request that the District revise the rule to provide that EMPs (redacted as necessary to remove confidential business information), once approved by the Air Pollution Control Officer, are public records and may be viewed by the general public. We continue to believe that this approach represents the best compromise between the interests of the facility owner/operator and the interests of the public. To the extent that a member of the public believes a particular plan is inadequate, that person may submit those concerns to the District and request that the plan be reviewed by District staff. While we do not see a need for public hearings on EMPs, if hearings are to remain a part of the rule, at a minimum, the rule should be revised to include specific criteria that would need to be demonstrated before a hearing is granted.

Reporting Requirements for Planned Reductions and Prevention Measures

Proposed Section 6-4-407 states that no later than two years after adoption of the rule, owners/operators must anticipate additional equipment, processes and procedures they might be able to install or implement to further reduce or prevent fugitive emissions, beyond those already contained in the EMP, and provide a schedule for implementation for these future control measures. The purpose of this provision is unclear, especially in light of the five-year review process required by Section 6-4-408, and we believe it is both unreasonable and unworkable. Section 6-4-407 puts facility owners/operators in the untenable position of having to predict the availability of new equipment or other technological advancements and to plan for their installation even in the absence of any determination that further controls are needed, or that such new controls would be cost-effective. The worldwide market for scrap metals is highly variable, and there is no way that a facility can realistically predict what types of facility modifications might be economically feasible over a five-year horizon. This provision should be deleted in its entirety. To the extent that improvements are needed to an EMP, these can be made at the conclusion of the five-year review cycles. In addition, Section 6-4-409 provides for modification of EMPs in certain circumstances and, in serious cases, the District can invoke its existing enforcement authority if necessary to abate conditions that are creating a public nuisance.

Old Definitions from Metal Melting Rule

The proposed rule still contains a definition for "Scrap Dryer/Delacquering Kiln/Decoating Kiln) (Section 6-4-210). Consistent with the District's deletion of the definition of "Sorting Operations" (former Section 6-4-214), the related definition in Section 6-4-210 should also be deleted, as it is also an artifact from the original draft rule that applied to both metal melting facilities and to scrap metal recycling facilities.

******

Thank you for your consideration of these comments.

Very truly yours,

Margaret Rosegay

Enclosure

cc: Scott Sloan
Chris Orsolini
Scott Miller
Steve Shinn
Melisa Cohen

REGULATION 6
PARTICULATE MATTER
RULE 4
METAL RECYCLING AND SHREDDING OPERATIONS

INDEX

REGULATION 6
PARTICULATE MATTER
RULE 4
METAL RECYCLING AND SHREDDING OPERATIONS

6-4-100 GENERAL

6-4-101 **Description:** The purpose of this Rule is to require the development of and compliance with Emissions Minimization Plans (EMP) designed to minimize the fugitive emissions of particulate matter from metal recycling facilities operating within the District.

6-4-102 **Applicability:** This Rule is applicable to any person who owns or operates within the District a metal recycling facility other than a metal shredder with a metal throughput of 1000 tons or more per rolling twelve month period. This Rule is applicable to all shredding operations within the District, including those with a metal throughput of less than 1000 tons per rolling twelve month period.

6-4-103 **Exemption, Regulation 12, Rule 13: Emissions Minimization Plan:** The requirements of Section 6-4-401 shall not apply to any person subject to the requirements of Regulation 12, Rule 13: Foundry and Forging Operations, Section 12-13-401, Emissions Minimization Plan Requirements, provided the provisions of Section 12-13-401 are met and the EMP includes the operations listed under Section 6-4-402.

6-4-104 **Limited Exemption, Non-Shredding Operations~~Annual Metal Throughput~~:** Neither the Standards (Sections 6-4-301 et seq.) nor the Administrative Requirements (Sections 6-4-401 et seq.) shall apply to a~~any~~ metal recycling facility which meets both of the following criteria:

104.1 ~~That~~ The facility does not conduct a shredding operation, and~~has a metal throughput of 50,000 tons or less per rolling twelve month period, or~~

104.2 ~~That~~ The facility does not process or handle Aggregate or Shredder Residue.~~does not conduct shredder operations, or that does not produce, receive, or process scrap metal containing shredder residue.~~

6-4-200 DEFINITIONS

6-4-XXX Aggregate: The mixture of non-ferrous metals and non-metallic materials that exists after the initial separation of ferrous metals from the shredder output by magnets and that is further processed by downstream separation equipment to separate and remove non-ferrous metals and other recyclable materials.

6-4-201 **Depollution Operations:** Depollution operations include the removal of lead batteries, polychlorinated biphenyl (PCB) capacitors; mercury switches; sodium azide canisters; refrigerants; free liquids, including gasoline, diesel fuel, radiator, wiper, brake and transmission fluids; and lead tire weights.

6-4-202 **Fugitive Emissions:** For the purpose of this Rule only, the emissions of particulate matter to the atmosphere that are not released through a system of equipment that is designed to capture pollutants at the source, convey them through ductwork, and exhaust them using forced ventilation. Fugitive emissions include particulate emissions from metal management, shredding and segregation operation, windblown dust, and track-out.

6-4-203 **Metal:** For the purposes of this Rule, metals include ferrous (iron-based) metals and alloys and non-ferrous (non-iron-based) metals and alloys. Examples of metals include iron, steel, and other iron-based alloys; aluminum, copper, brass, bronze, gold, silver, zinc, tin, lead, platinum, nickel, chromium, cadmium, manganese, mercury, tungsten, and titanium and their alloys.

6-4-204 **Metal Management:** The transport, receipt, collection, sorting, segregation, separation, compilation, crushing, shredding, and storage of metals, and metal-containing materials including Aggregate ~~and non-metallic materials~~ at a metal recycling and shredding facility.

6-4-205 **Metal Recycling Facility**: Any real property or structure that is used for the receipt, storage, segregation, or separation of scrap metal and mixed materials for reuse or resale.

6-4-206 **Metal Throughput:** The weight of metal, in tons, collected at a metal recycling facility.

6-4-207 **Minimization:** The reduction to the smallest possible amount, taking into account economic and technical feasibility.

6-4-208 **Particulate Matter:** Any material that is emitted as liquid or solid particles or gaseous material which becomes liquid or solid particles that can remain suspended in the air, excluding uncombined water.

6-4-209 **Responsible Manager:** An employee designated by the owner or operator of a facility to take actions required for compliance with this Rule on behalf of that facility.

~~**6-4-210** **Scrap Dryer / Delacquering Kiln / Decoating Kiln:** A unit used primarily to remove various organic contaminants such as oil, paint, lacquer, ink, plastic, and/or rubber from aluminum scrap (including used beverage containers) prior to melting.~~

6-4-211 **Scrap Metal:** Any metal or metal-containing material that has been discarded or removed from the use for which it was produced or manufactured and which is intended for recycling~~reprocessing~~.

6-4-212 **Shredder Residue (SR):** The predominantly non-metallic residue resulting from the shredding of end-of-life vehicles, appliances and other scrap metal materials after completion of all processing operations and from which all economically recoverable recyclable materials have been removed, including ferrous metals, non-ferrous metals, and any other material for which there is a current market.~~The material that remains after scrapped items, such as automobiles and appliances, are shredded and is a mixture containing metal and~~ Shredder residue consists largely of non-metallic materials including, but not limited to, plastics, vinyl, sponge, foam, leather, textiles, rubber and glass, and is also known as "fluff." Shredder residue does not refer to incidental amounts of non-metallic material that may be present in processed scrap metal that is sold, or awaiting sale, to a third party.

6-4-213 **Shredding Operation:** The size-reduction ~~cutting and crushing~~ of cars and other metallic items into fist-sized or smaller pieces of metal by a hammermill~~chunks or smaller that are screened and subsequently separated by machinery that drives rotors that spin hammers~~.

~~**6-4-214** **Sorting Operations:** The removal of various contaminants using a scrap dryer, delacquering kiln, or decoating kiln.~~

6-4-300 **STANDARDS**

6-4-301 **Compliance with Emissions Minimization Plan:**

301.1 Effective 90 days from the date that the Emissions Minimization Plan (EMP) is approved by the APCO pursuant to Section 6-4-405.5, the owner or operator of a metal recycling facility shall operate the facility at all times in accordance with its approved EMP; or~~.~~

301.2 Thirty days following disapproval of the EMP by the APCO, the owner or operator of a metal recycling facility shall be in violation of this section.

6-4-400 **ADMINISTRATIVE REQUIREMENTS**

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6-4-401 **Emissions Minimization Plan Requirements:** The owner or operator of any metal recycling facility subject to the requirements of this Rule shall develop and submit to the APCO in accordance with Sections 6-4-402 through 406 an Emissions Minimization Plan (EMP) that details management practices, measures, equipment and procedures that are employed or will be implemented to minimize fugitive emissions.

6-4-402 **Operations Subject to the EMP:** The EMP shall address fugitive emissions from all of the following operations that are conducted at and ~~or~~ areas located at, ~~and the materials that handled at,~~ the metal recycling facility:

402.1 Roadways and other Trafficked Surfaces;
402.2 Metal Management:
402.3 Shredder Residue (SR) Management; and
402.4 Depollution Operations.

6-4-403 **Contents of the EMP**: The owner of operator of the metal recycling facility subject to Section 6-4-401 shall prepare a complete and accurate EMP that details the management practices, measures, equipment and procedures that are employed or are scheduled to be implemented to minimize fugitive emissions for all operations subject to the EMP:

403.1 **Technical Data:** The EMP shall include:

1.1 A detailed process flow diagram that clearly and accurately indicates all operations listed in Section 6-4-402 and the flows of materials used or produced in those operations at the facility, starting from the point of material receipt from offsite to the achievement of the final product. The process flow diagram shall identify the monitoring and the processes and controls that minimize fugitive emissions, including, but not limited to scrubbers, cyclones, baghouses, and baghouse leak detectors. All abatement and control devices shall be identified using either District Source Numbers according to their District Permit or as exempt from District permit requirements.

1.2 A facility layout/site plan that clearly and accurately indicates the relative locations of all items identified in Section 6-4-403.1.1, including all equipment and permitted and exempt sources at the facility, all building walls, partitions, doors, windows, vents, and openings, and indicate all areas that have particulate matter abatement, and any other source(s) that may contribute to particulate emissions. All metal recycling equipment shall be identified using either District Source Numbers according to their District Permit or as exempt from District permit requirements.

1.3 The name of the Responsible Manager and alternate responsible managers, if any, their schedule and contact information.

403.2 **Fugitive Emissions Reductions Previously Realized:** A description of the equipment, processes and procedures installed or implemented within the last five years to reduce fugitive emissions.

403.3 **Scrap Acceptance Policy:** A copy of the facility's scrap acceptance policy outlining practices to prevent entraining into the metal management process those substances that are removed during depollution operations, such as free liquids, mercury switches, sodium azide canisters and polychlorinated biphenyl (PCB) capacitors.

403.4 **Schedule for the Implementation of the EMP Elements:** A listing of each of the following:

4.1 The specific elements of the EMP that are in place as of the initial date of the submission of the EMP to the APCO for approval; and

4.2 The specific elements of the EMP that will be implemented following APCO approval of the EMP and the implementation schedule for each of those specific elements.

6-4-404 **Compliance Schedule for the EMP:** The owner or operator of any metal recycling facility required to develop an EMP submit a complete and accurate EMP in accordance with the following schedule:

404.1 Submission: Submit the EMP to the APCO no later than [12 months following adoption of this Rule] or no later than no later than 12 months following becoming subject to the requirements set forth in Section 6-4-401. The Responsible Manager shall certify the EMP as complete and accurate and sign it. The APCO may require the owner or operator to submit additional information to assure the completeness and accuracy of the EMP to ensure the minimization of fugitive emissions of particulate matter.

404.2 Completeness Determination: Within 30 days of receipt of the EMP, the APCO will notify the owner or operator in writing whether the EMP is complete. The EMP is complete if the APCO determines that it includes all of the information required by Sections 6-4-402 and 403. If the APCO determines that the proposed EMP is not complete, the notification will specify the basis for this determination and the required corrective action.

404.3 Corrective Action: Upon receipt of such notification, the owner or operator shall correct the deficiencies and resubmit the proposed EMP within 30 days. If the APCO determines that the owner or operator failed to correct any completeness deficiency identified in the notification, the APCO will reject the EMP as incomplete.

6-4-405 Review and Approval of the EMP: The procedures for determining whether each EMP meets the applicable requirements of this Rule are as follows:

405.1 Receipt and File Creation: Upon receipt of an EMP from a facility subject to the requirements of Section 6-4-401, the APCO shall create a file that shall include the EMP as received, the results of the completeness determination, ~~any comments received during the public comment period,~~ and any recommendations made by the APCO.

405.2 Public Record~~Comment~~: Following approval as set forth in this section, the ~~The~~ APCO shall make the complete EMP (with exception of facility-designated confidential information) available to the public in accordance with the California Public Records Act. ~~for public comment for 30 days. The APCO will collect and forward all public comments to the facility for consideration at the end of the 30-day comment period. At the APCO's discretion, the District may extend the comment period up to 90 days and/or may hold a public meeting to discuss the draft EMP during the comment period.~~

405.3 APCO Recommendations: Within 30 days of receipt of the EMP from the facility, ~~the close of the public comment period,~~ the APCO shall review the draft EMP ~~and the public comments~~ and notify the owner or operator of the APCO's recommendations, if any, for additional processes and procedures to further reduce or prevent fugitive emissions from the metal recycling facility, based on technical and economic feasibility, and made in consideration of worker health and safety.

405.4 Revision and Final Submission: Within 30 days of receipt of the APCO recommendations, the owner or operator shall:

- **4.1** Accept all of the APCO's recommendations and submit the EMP with the incorporated recommendations to the APCO and certified by the Responsible Manager; or
- **4.2** Specify the APCO recommendations that are accepted, and submit the EMP with the incorporated APCO recommendations to the APCO and provide a basis for the rejection of any the APCO's recommendations. The Responsible Manager shall certify the EMP.

405.5 Approval: With 30 days of the receipt of the final submission of the EMP, the APCO will review the EMP.

- **5.1** If the APCO determines that the EMP does not meet the requirements of Sections 6-4-402, 403, 405.3 and 405.4, the APCO will notify the owner or operator in writing. The notification will specify the basis for this determination. Upon receipt of such notification, the owner or operator shall correct the identified deficiencies and resubmit the EMP to the APCO within 30 days. If the APCO determines that the owner or operator failed to correct any deficiency

identified in the notification, the APCO will disapprove the EMP.

5.2 If the APCO determines that the EMP meets the requirements of Section 6-4-402, 403, 405.3 and 405.4, the APCO will approve the EMP and shall provide written notification to the owner or operator. This period may be extended if necessary to comply with state law.

6-4-406 **Designation of Confidential Information:** With each submission of an EMP or any portions thereof or revisions thereto, the owner or operator of a metal recycling facility subject to Section 6-4-401 shall designate as confidential any information claimed to be exempt from public disclosure as trade secrets or by other provisions of law. If a document is submitted that contains information designated confidential in accordance with this Section, the owner or operator shall provide a justification for this designation and shall submit a separate copy of the document marked as "public copy," with the information claimed to be confidential redacted.

~~**6-4-407** **Reporting Requirements for Planned Fugitive Emissions Reductions and Prevention Measures:** The owner of operator of a metal recycling facility subject to Section 6-4-401 shall report to the APCO no later than two years following the adoption of the Rule a description of the equipment and all feasible processes and procedures to be installed or implemented within the next five years to reduce or prevent fugitive emissions, that are not a part of the EMP pursuant to Section 6-4-403.2 with a schedule of implementation.~~

6-4-408 **Five-Year Review of the EMP:** The owner or operator of a metal recycling facility subject to the requirements of Section 6-4-401 shall update the APCO-approved EMP and submit the updated EMP to the APCO for review within 90 days of the five-year anniversary date of the approval of the original EMP and within 90 days of every five-year anniversary thereafter. Review and approval of the EMP will follow the schedule in Sections 6-4-402 and 403. The updated EMP must be certified by a Responsible Manager.

6-4-409 **Review and Modification of the EMP:** Within 90 days of any of the following events**:**

409.1 The APCO determined that the owner or operator violated Section 6-4-301; or

409.2 The APCO determined that the owner or operator violated District, State or federal air quality regulations pertaining to emissions of PM; or

409.3 The owner or operator commenced a facility operation, process, equipment, or throughput change that required a modification of the Permit to Operate for that operation, process, equipment or throughput change;

the APCO may notify the owner or operator of a metal recycling facility where the triggering event occurred, and that is subject to the requirements of Section 6-4-401, to review and submit a complete and accurate revised EMP to the APCO that updates the EMP to include the modified operation or source or to prevent a future violation of the EMP or applicable law or regulation specified herein, in accordance with schedule set forth in Section 6-4-404.

6-4-500 RECORDS AND MONITORING

6-4-501 **Recordkeeping Requirements:** The owner or operator of any metal recycling facility subject to the requirements of this rule shall maintain all records that are necessary to determine compliance with the requirements of Sections 6-4-301 and 401 for a minimum of five years and make them available to the APCO or a designee of the APCO upon request. The records shall include the monthly throughput of each type of metal processed, including metal shredded or recycled and the basis for each throughput determination.

6-4-502 **Annual Scrap Metal Throughput:** The owner or operator of any metal recycling facility subject to the requirements of this rule shall maintain records of the annual throughput of scrap metal recycled ~~and the basis for the throughput determination~~ on a twelve-month rolling average and of the basis for the throughput determination for a minimum of five years. The owner or operator shall make the records available to the APCO or a designee of the APCO upon request.

6-4-600 MANUAL OF PROCEDURES

STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
AIR RESOURCES BOARD

P. O. Box 2815
Sacramento, California 95812

April 08, 2013

ARB Staff Rule Review Results

To: Mr. Daniel Belik, Rule Development Manager
Bay Area Air Quality Management District
Telephone Number: (415) 749-4786
E-mail: dbelik@baaqmd.gov

From: Ava Yaghoobirad, (916) 327-5603
E-mail: ayaghoob@arb.ca.gov

The following proposed rules, which are scheduled for public hearing to be held by your District Board on May 01, 2013, were received by us on March 07, 2013, for our review:

Rule 12-13	Miscellaneous Standards of Performance - Foundry and Forging Operations
Rule 6-4	Particulate Matter - Metal Recycling and Shredding Operations
Rule 2-1	Permits - General Requirements

The Air Resources Board staff has reviewed the rules and, based on the information available to us at this time, we have no comments.

The rules were examined by the Enforcement Division and the Stationary Source Division but not by the Planning and Technical Support Division.

If you have any questions, please contact me by e-mail or at the telephone number above.

Appendix B

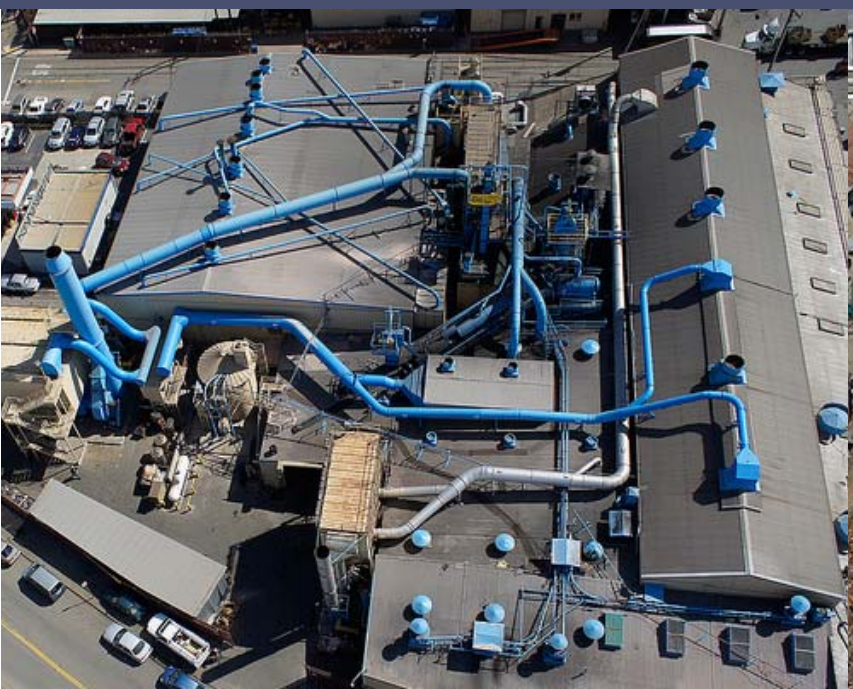
Socioeconomic Analysis

bae urban economics

Socio-Economic Impact Study of the Proposed Bay Area 2012 Clean Air Plan, Control Measure SSM-1, Regulation 12: Miscellaneous Standards of Performance, Rule 13: Foundry and Forging Operations and Regulation 6: Particulate Matter, Rule 4: Metal Recycling and Shredding Operations

Submitted to: Bay Area Air Quality Management District

February, 2013



bae urban economics

San Francisco
1285 66th Street
Second Floor
Emeryville, CA 94608
510.547.9380

Sacramento
803 2nd Street
Suite A
Davis, CA 95616
530.750.2195

Los Angeles
5405 Wilshire Blvd.
Suite 291
Los Angeles, CA 90036
213.471.2666

Washington DC
1436 U Street NW
Suite 403
Washington, DC 20009
202.588.8945

New York City
121 West 27th Street
Suite 705
New York, NY 10001
212.683.4486

www.bae1.com

Table of Contents

EXECUTIVE SUMMARY

Description of Proposed Rule

The Bay Area Air Quality Management District (BAAQMD) proposes to enact Regulation 12, Rule 13 (Rule 12-13) to limit fugitive emissions from foundries and forging operations, and Regulation 6, Rule 4 (Rule 6-4) to limit particulate emissions from facilities engaging in metal recycling and shredding.

Foundries, forging operations, and metal recycling and shredding operations are sources of emissions of particulate matter ("PM," including toxic metals that are toxic air contaminants), VOC (including toxic and odorous substances), and other pollutants. While many of these facilities comply with current District rules and regulations and some facilities must comply also with federal rules that set emission limits for toxic compounds, the District has received public complaints of odors from some facilities. Some of these facilities also raise concern with respect to PM emissions (including toxic metal particulates), particularly when in close proximity to residential areas (with most being located within or near Community Air Risk Evaluation (CARE) program designated areas). BAAQMD staff has evaluated these industrial sectors and concluded that PM (including toxic metals) and odorous substance emissions may be further reduced through the implementation of procedures specific to each facility aimed at reducing fugitive emissions of these pollutants.

Both of these proposed rules would rely on the implementation of management procedures through the development of Emissions Minimization Plans (EMP) to minimize emissions. The reliance on the development of an EMP allows each facility to tailor its approach to reducing or minimizing emissions to the unique conditions and configuration of its affected operations. Development of an EMP also encourages innovation and challenges the industry to look for more efficient, cost-effective methods of emissions control, minimization, and prevention. Further, requiring the development of and compliance with an EMP also allows an exchange of information via the District's review and recommendations on the procedures received and through discussions with the affected industries.

Each of these facilities is distinct from the others in its operations, configuration, and location. As a result, BAAQMD is not attempting to describe the exact emissions minimization measures that might be put in place for each establishment. Instead, the operator of each facility will be required to evaluate its own operations and conditions to determine what is best to reduce fugitive emissions from an operational and cost perspective.

As a result, BAAQMD has developed case studies describing a range of potential measures which do not necessarily represent the costs each facility would incur, but they are analyzed here to provide a general idea of the order of magnitude of the costs relative to the estimated revenues and profit levels for these facilities. The case study examples of emissions minimization measures that might be employed are as follows:

1. Minimization of Air Drafts for Metal Finishing Operations
2. Upgrading PM10 Emissions Capture and Control Systems at a Foundry
3. Shakers to Reduce Trackout onto Public Roadways
4. Reducing Fugitive PM10 Emissions from Transfer Operations at a Metal Recycling Facility
5. Dust Control for Open Spaces and Stockpiles Using Industrial Misters
6. Erecting Screened Fences as Wind Barriers
7. Switching to Lower VOC Binder Formulation

The first two measures and measure seven would be applicable for the foundries and forging businesses; measures three through five would apply to the scrap recycling facilities, and measure six could be applicable for either category of facility.

Socio-Economic Impacts

In order to estimate the economic impacts of enacting Rule 12-13 and Rule 6-4 on the affected industries, this report compares the annualized compliance costs for these industries with their 10-year average profit ratio. The analysis uses data from the BAAQMD, Dun & Bradstreet, InfoUSA, company annual reports and SEC filings, the Internal Revenue Service (IRS), and BAAQMD.

Economic Profile of Affected Industries

According to BAAQMD, the following establishments would be affected by proposed Rule 12-13:

Name	City	NAICS
Custom Alloy Scrap Sales, Inc. (CASS)	Oakland	331314
AB&I Foundry	Oakland	331511
US Pipe and Foundry Co.	Union City	331511
Pacific Steel Casting	Berkeley	331513
USS-POSCO Industries	Pittsburg	331221

These establishments are all in NAICS 331, Primary Metal Manufacturing. Three of them are in NAICS 3315, Foundries. By six-digit NAICS, two of these are NAICS 331511, Iron foundries,

and one is in NAICS 331513, Steel foundries (except investment). One of the others is in NAICS 331314, Secondary smelting and alloying of aluminum, and the remaining establishment is in NAICS 331221, Rolled steel shape manufacturing.

The following establishments would be affected by proposed Rule 6-4:

Name	City	NAICS
SIMS Metals	Redwood City	423930
SIMS Metals	Richmond	423930
Schnitzer Steel	Oakland	423930

These establishments are all in NAICS 423930, Recyclable Material Merchant Wholesalers.

Economic Impacts on Affected Industries

Available data indicate that the annualized compliance costs for each of the following measures are below the threshold of 10 percent of profits for all locations considered for each of the following measures:

- Minimization of Air Drafts for Metal Finishing Operations
- Shakers to Reduce Trackout onto Public Roadways
- Reducing Fugitive PM10 Emissions from Transfer Operations at a Metal Recycling Facility
- Switching to Lower VOC Binder Formulation

Annualized compliance costs for the following measure is above the 10 percent burden threshold for all locations considered:

- Dust Control for Open Spaces and Stockpiles Using Industrial Misters

For each of the following measures, the results relative to the cost threshold were mixed, with some locations above and some below the threshold:

- Upgrading PM10 Emissions Capture and Control Systems at a Foundry
- Erecting Screened Fences as Wind Barriers

For Case Study 2, Upgrading PM10 Emissions Capture and Control Systems at a Foundry, four of the five facilities showed costs above the 10 percent threshold; only the larger USS-POSCO facility was below the threshold. For Case Study 6, Erecting 22' Screened Fences as Wind Barriers, three of the eight establishments were below the 10 percent threshold.

It should be noted that as case studies, costs in some cases are based on certain assumptions about sizing, but in reality the costs might vary based on the needs of a particular facility, e.g., the size of a fenced yard might vary from that assumed here.

Regional Employment, Indirect, and Induced Impacts

While some of the case study solutions appear to have compliance costs that are greater than 10 percent of annual profits, the structure of these rules is driven by the EMP, which would be developed by each business and as such, would exclude solutions that are not considered financially feasible by the business itself or determined to be financially feasible by the District. As a result, no employment impacts are anticipated due to implementation of these rules, either direct, indirect, or induced.

Impacts on Small Businesses

Using the California Government Code 14835's definition of a small business, most of these establishments are not independently owned, or are too large to quality as small businesses under these criteria. The one exception might be Custom Alloy Scrap Sales; the Oakland site is their primary location and based on available data, it would qualify as a small business if this were their only site, but the company has smaller branch locations that appear to put it over the employment and gross receipts thresholds.

DESCRIPTION OF PROPOSED RULE

The Bay Area Air Quality Management District (BAAQMD) proposes to enact Regulation 12, Rule 13 (Rule 12-13) to limit fugitive emissions from foundries and forging operations, and Regulation 6, Rule 4 (Rule 6-4) to limit particulate emissions from industries engaging in metal recycling and shredding. These rules would take effect twelve months following adoption.

Foundry and forging operations and metal recycling and shredding operations are sources of emissions of particulate matter ("PM," including toxic metals that are toxic air contaminants), VOC (including toxic and odorous substances), and other pollutants. While many of these facilities comply with current District rules and regulations and some facilities must comply also with federal rules that set emission limits for toxic compounds, the District has received public complaints of odors from some facilities. Some of these facilities also raise concern with respect to PM emissions (including toxic metal particulates), particularly when in close proximity to residential areas (with most being located within or near Community Air Risk Evaluation (CARE) program designated areas). BAAQMD staff has evaluated these industrial sectors and concluded that PM (including toxic metals) and odorous substance emissions may be further reduced through the implementation of procedures specific to each facility aimed at reducing fugitive emissions of these pollutants.

Both of these proposed rules would rely on the implementation of management procedures through the development of Emissions Minimization Plans (EMP) to minimize emissions. The reliance on the development of an EMP allows each facility to tailor its approach to reducing or minimizing emissions to the unique conditions and configuration of its affected operations. Development of an EMP also encourages innovation and challenges the industry to look for more efficient, cost-effective methods of emissions control, minimization, and prevention. Further, requiring the development of and compliance with an EMP also allows an exchange of information via the District's review and recommendations on the procedures received and through discussions with the affected industries.

Proposed Rule 12-13

At foundries and forging facilities, the casting of molten metals is the primary emission source of PM and odorous substances, defined as phenols and phenolic compounds. Rule 12-13 would address fugitive emissions from several general processes of metal melting and casting and associated operations. These emissions occur when the hot molten metals contact the molds and cores that are often formulated with binders that contain organic compounds, phenols and phenolic compounds that are detectable at concentrations of less than one part

per million. Emissions also occur from associated operations such as scrap handling, mold and core making, shakeout and recycling and cast metal part blasting and finishing.

Rule 12-13 would affect the facilities that either melt metals (foundries) or heat treat metals (forges). The rule would apply to metal melting and processing operations that require a District permit. Facilities with an annual metal throughput (metal charged to a furnace or heated in an oven) of 1,000 tons or more would be subject to all of the requirements of the rule; those facilities with a throughput between than one and 1,000 tons would only be required to keep records on their annual metal throughput. This applicability would address those facilities with the greatest potential for emissions of PM and odorous substances.

Rule 12-13 would contain no emissions limits. The District would rely upon the emissions limits already contained in Regulation 11: Hazardous Pollutants, Rule 15: Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting and applicable federal rules (NESHAPs) that affect metal melting operations. Rule 12-13 would require affected facilities to develop and submit to the District for approval an Emissions Minimization Plan (EMP) that would detail the practices that have been or will be implemented to minimize fugitive emissions.

Proposed Rule 6-4

Operations at metal recycling facilities result in the emissions of PM and visible emissions from metal management and shredding operations, including handling of resultant shredder residue.

Rule 6-4 would focus on reducing fugitive emissions from metal recycling facilities that compile, shred, and sort scrap metal for resale, including metal management and shredding operations, including minimization of automotive shredder residue (ASR) or "fluff." Rule 6-4 would apply to scrap metal recycling facilities that receive at least 1,000 tons of scrap metal per year. Metal recycling facilities with an annual metal throughput of 50,000 tons of more would be subject to the general requirements of the rule; those recycling facilities with an annual metal throughput between 1,000 and 50,000 tons would only be required to keep records of their annual metal throughput.

Like Rule 12-13, Rule 6-4 does not contain emission limits. There are no federal NESHAPs that apply to this industry, with the exception of the Subpart T—National Emission Standards for Halogenated Solvent Cleaning and the Subpart B—Servicing of Motor Vehicle Air Conditioners for refrigerants which are currently addressed in District Regulation 8, Rule 16: Solvent Cleaning Operations and Regulation 12, Rule 7: Motor Vehicle Air Conditioner

Refrigerant, respectively. These rules would only apply to these facilities if they operate solvent cleaning apparatus using one of the six regulated chemicals, or if they remove air conditioning refrigerant from automobiles. However, the shredding operations are subject to California state regulations under the Department of Resources Recycling and Recovery (CalRecycle), the Department of Toxics Substances Control and the Water Resources Control Board, often enforced through Certified Unified Program Agencies (CUPA). The facilities are also subject to District Regulation 6, Rule 1: Particulate Matter, General Requirements, and have permit limits that address process PM emissions from these operations.

Rule 6-4 would require affected facilities to develop and implement an EMP that would detail the practices and equipment that have been or will be implemented to minimize fugitive emissions involving a variety of operations, areas, and materials:

1. Roadways and other trafficked areas;
2. Metal Management, including:
    a. Receipt of scrap from providers,
    b. Handling and storage operations,
    c. Crushing operations,
    d. Sorting operations,
    e. Shredding / hammermill operations;
3. Auto shredder residue;
4. Depollution Activities, the removal of materials such as
    a. Lead batteries;
    b. Polychlorinated Biphenyl capacitors;
    c. Mercury switches; and
    d. Sodium Azide canisters.

REGIONAL TRENDS

This section provides background information on the demographic and economic trends for the San Francisco Bay Area, which represents the BAAQMD's District. The San Francisco Bay Area includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties. Regional trends are compared to statewide demographic and economic patterns since 2000, in order to show the region's unique characteristics relative to the State.

Regional Demographic Trends

Table 1 shows the population and household trends for the nine county Bay Area and California between 2000 and 2012. During this time, the Bay Area's population increased by 6.9 percent, compared to 11.2 percent for California statewide. Likewise, the number of Bay Area households grew by 6.2 percent, compared to a 9.8 percent statewide increase.

Table 1: Population and Household Trends, 2000-2012

Bay Area (a)	**2000**	**2012**	**Total Change 2000-2012**	**% Change 2000-2012**
Population	6,784,348	7,249,563	465,215	6.9%
Households	2,466,020	2,620,012	153,992	6.2%
Average Household Size	2.69	2.71		
California				
Population	33,873,086	37,678,563	3,805,477	11.2%
Households	11,502,871	12,633,403	1,130,532	9.8%
Average Household Size	2.87	2.92		

Notes:
(a) Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties.

Sources: California, Department of Finance, 2012; US Census, 2000; BAE 2012.

The slower growth in the Bay Area is tied to its relatively built out environment, compared to the state overall. While Central Valley locations, such as the Sacramento region, experienced large increases in the number of housing units, the Bay Area only experienced moderate increases in housing units.

Regional Economic Trends

In the five-year period between 2006 and 2011, the Bay Area's employment base shrank by 4.8 percent, decreasing from 3.29 million jobs to 3.12 million jobs (see Table 2). This represented slightly smaller percentage job loss than the State, where the number of jobs shrank by over six percent.

The largest non-government sectors in the Bay Area economy are Manufacturing; Professional, Scientific, & Technical Services; and Healthcare & Social Assistance. Each of these sectors constituted 10 percent or more of the region's total jobs in 2011. Over the five-year period the Manufacturing sector lost 9.5 percent of its jobs, but the Professional, Scientific, & Technical Services sector grew by 8.0 percent, and the Healthcare & Social Assistance sector grew by 9.8 percent. Statewide, Manufacturing declined by 16.3 percent, while the Professional, Scientific, & Technical Services and Healthcare & Social Assistance sectors grew by 2.4 and 12.2 percent, respectively. Overall, the Bay Area's economic base largely reflects the state's base, sharing a similar distribution of employment across sectors. Table 2 shows the jobs by sector in 2006 and 2011.

The industries affected by Rule 12-13 fall in the Manufacturing sector, which makes up ten percent of the region's job base. This sector contracted over the five-year period, with its percentage share of overall employment declining very slightly (less than one percent). Those industries affected by Rule 6-4 fall in the Wholesale Trade sector, which accounts for 3.6 percent of the region's job base. This sector's share of employment also fell negligibly over the 2006 to 2011 period (less than half a percent). The decrease in overall jobs in these sectors follows the recent national trends of the Great Recession, while decreases in the share of local manufacturing jobs also mirrors long-term national trends reflecting manufacturing's reduced presence in the economy.

Table 2: Jobs by Sector, 2006-2011 (a)

Industry Sector	Bay Area 2006 (b) Jobs	Bay Area 2006 (b) % Total	Bay Area 2011 (c) Jobs	Bay Area 2011 (c) % Total	Bay Area % Change 2006-2011	California 2006 (b) Jobs	California 2006 (b) % Total	California 2011 (c) Jobs	California 2011 (c) % Total	California % Change 2006-2011
Agriculture	20,200	0.6%	18,800	0.6%	-6.9%	375,200	2.4%	385,300	2.7%	2.7%
Mining and Logging	2,200	0.1%	2,100	0.1%	-4.5%	25,100	0.2%	28,500	0.2%	13.5%
Construction	188,600	5.7%	125,800	4.0%	-33.3%	933,700	6.0%	553,700	3.8%	-40.7%
Manufacturing	344,100	10.5%	311,400	10.0%	-9.5%	1,488,000	9.6%	1,245,800	8.6%	-16.3%
Wholesale Trade	126,500	3.8%	113,200	3.6%	-10.5%	702,500	4.6%	659,000	4.6%	-6.2%
Retail Trade	339,500	10.3%	310,100	9.9%	-8.7%	1,680,100	10.9%	1,532,000	10.6%	-8.8%
Transportation, Warehousing, and Utilities	100,100	3.0%	89,700	2.9%	-10.4%	496,100	3.2%	471,900	3.3%	-4.9%
Information	112,000	3.4%	116,600	3.7%	4.1%	466,000	3.0%	432,400	3.0%	-7.2%
Finance and Insurance	145,200	4.4%	117,500	3.8%	-19.1%	639,300	4.1%	516,000	3.6%	-19.3%
Real Estate and Rental and Leasing	54,300	1.7%	46,500	1.5%	-14.4%	288,500	1.9%	245,500	1.7%	-14.9%
Professional, Scientific, and Technical Services	308,300	9.4%	332,900	10.6%	8.0%	1,026,500	6.7%	1,051,600	7.3%	2.4%
Management of Companies and Enterprises	52,800	1.6%	57,400	1.8%	8.7%	212,600	1.4%	199,200	1.4%	-6.3%
Administrative and Waste Services	187,100	5.7%	161,700	5.2%	-13.6%	1,003,300	6.5%	875,600	6.1%	-12.7%
Educational Services	73,400	2.2%	85,600	2.7%	16.6%	277,600	1.8%	326,300	2.3%	17.5%
Health Care and Social Assistance	295,300	9.0%	324,300	10.4%	9.8%	1,343,800	8.7%	1,507,300	10.4%	12.2%
Arts, Entertainment, and Recreation	33,800	1.0%	34,500	1.1%	2.1%	245,200	1.6%	244,100	1.7%	-0.4%
Accommodation and Food Services	207,700	6.3%	217,000	6.9%	4.5%	1,273,800	8.3%	1,286,200	8.9%	1.0%
Other Services, except Public Administration	109,600	3.3%	110,400	3.5%	0.7%	507,100	3.3%	486,900	3.4%	-4.0%
Government (d)	477,700	14.5%	449,600	14.4%	-5.9%	2,452,300	15.9%	2,398,700	16.6%	-2.2%
Subtotal (e)	**3,178,300**	**96.7%**	**3,024,700**	**96.7%**	**-4.8%**	**15,435,500**	**100.0%**	**14,445,700**	**100.0%**	**-6.4%**
Additional Suppressed Employment (f)	107,900	3.3%	103,600	3.3%	-4.0%	n/a	n/a	n/a	n/a	
Total, All Employment (e)	**3,286,200**	**100.0%**	**3,128,300**	**100.0%**	**-4.8%**	**15,435,500**	**100.0%**	**14,445,700**	**100.0%**	**-6.4%**

Notes:
(a) Includes all wage and salary employment.
(b) Represents annual average employment for calendar year 2006.
(c) Represents annual average employment for calendar year 2011.
(d) Government employment includes workers in all local, state and Federal workers, not just those in public administration. For example, all public school staff are in the Government category.
(e) Totals may not add due to independent rounding.
(f) County employment for some industries in some counties was suppressed by EDD due to the small number of firms reporting in the industry for a given county.

Sources: California Employment Development Department, 2011; BAE, 2012.

Affected Industries

Rule 12-13

According to BAAQMD, the following establishments would be affected by proposed Rule 12-13:

Name	City	NAICS
Custom Alloy Scrap Sales, Inc. (CASS)	Oakland	331314
AB&I Foundry	Oakland	331511
US Pipe and Foundry Co.	Union City	331511
Pacific Steel Casting	Berkeley	331513
USS-POSCO Industries	Pittsburg	331221

These establishments are all in NAICS 331, Primary Metal Manufacturing. Three of them are in NAICS 3315, Foundries. By six-digit NAICS, two of these are NAICS 331511, Iron foundries, and one is in NAICS 331513, Steel foundries (except investment). One of the others is in NAICS 331314, Secondary smelting and alloying of aluminum, and the remaining establishment is in NAICS 331221, Rolled steel shape manufacturing.

According to the estimates derived from the US Census, in 2010, the Bay Area had 70 primary metal manufacturing establishments that accounted for 2,553 jobs (see Table 3). Dividing the total jobs by the number of establishments shows that on average, each establishment employed 36 workers. Within the specific six-digit NAICS codes, there were only a limited number of establishments; two establishments in NAICS 331221, two establishments in NAICS 331314, seven establishments in NAICS 331511, and six in NAICS 331513. However, BAAQMD staff indicated that only the five listed establishments will be impacted by the plan requirements of proposed Rule 12-13. It appears that some of specific businesses listed above are classified under other NAICS codes in County Business Patterns; for instance, County Business Patterns lists no establishments in Contra Costa County for NAICS 331221, so USS POSCO must be tabulated elsewhere.

Table 3: Profile of Affected Industry for Rule 12-13

Industry	Primary Metal Manufacturing (NAICS 331)	Rolled Steel Shape Manu-facturing (NAICS 331221)	Secondary Smelting and Alloying of Aluminum (NAICS 331314)	Iron Foundries (NAICS 331511)	Steel Foundries (except investment) (NAICS 331513)
Employment (a)	2,553	77	37	371	583
Average Employment per Establishment	36	39	19	53	97
Number of Establishments (by workforce size)					
1-4	27	1	1	3	2
5-9	10	0	0	2	0
10-19	10	0	0	0	2
20-49	13	0	1	0	0
50-99	5	1	0	0	0
100+	5	0	0	2	2
Total	70 (b)	2	2	7	6

Notes:
(a) For counties where the actual employment number is not disclosed for confidentiality purposes, the analysis uses the midpoint employment number for each size cohort.
(b) BAAQMD estimates that the Bay Area has five establishments in this sector that will be affected by the proposed Rule.

Sources: U.S. Census County Business Patterns, 2010; BAE, 2012.

Rule 6-4

According to BAAQMD, the following establishments would be affected by the plan requirements of proposed Rule 6-4:

Name	City	NAICS
SIMS Metals	Redwood City	423930
SIMS Metals	Richmond	423930
Schnitzer Steel	Oakland	423930

These three establishments are all in NAICS 423, Durable Goods Merchant Wholesalers, more specifically in NAICS 4239, Miscellaneous Durable Goods Merchant Wholesalers, and even more specifically in NAICS 423930, Recyclable Material Merchant Wholesalers. These are all broader sectors than those specifically covered by Rule 12-13, with more employment and establishments encompassing a variety of unrelated miscellaneous types of wholesalers. For the Bay Area, the NAICS 423 sector covers nearly 6,000 establishments, employing almost 134,000 workers (see Table 4). NAICS 4239 covers 780 establishments with slight less than 11,000 estimated workers, and more specifically, NAICS 423930 covers 155 establishments with approximately 2,600 workers. Clearly, even at the level of six-digit NAICS specificity, most establishments in these sectors appear not to be engaged in activities covered by the proposed Rule.

Table 4: Profile of Affected Industry for Rule 6-4

Industry	Durable goods merchant wholesalers (NAICS 423)	Miscellaneous durable goods merchant wholesalers (NAICS 4239)	Recyclable material merchant wholesalers (NAICS 423930)
Employment (a)	133,905	10,906	2,582
Average Employment per Establishment	23	14	17
Number of Establishments (by workforce size)			
1-4	2,917	442	61
5-9	1,177	152	27
10-19	863	94	27
20-49	590	66	27
50-99	193	17	11
100+	172	9	2
Total	5,912 (b)	780	155

Notes:
(a) For counties where the actual employment number is not disclosed for confidentiality purposes, the analysis uses the midpoint employment number for each size cohort.
(b) BAAQMD estimates that the Bay Area has three establishments in this sector that will be affected by the proposed Rule.

Sources: U.S. Census County Business Patterns, 2010; BAE, 2012.

SOCIO-ECONOMIC IMPACTS

This section discusses the analysis' methodology, as well as the economic profile of the affected industry, and annualized rule compliance costs associated with adopting Rules 12-13 and 6-4. It then determines whether the annualized compliance costs would significantly burden the affected industries, and estimates adoption of the rule's regional economic impacts.

Methodology

In order to estimate the economic impacts of adopting Rules 12-13 and 6-4 on the relevant industries, this report compares annualized compliance costs for the affected industries with their profit ratios. The analysis uses data from the BAAQMD, Dun & Bradstreet, InfoUSA, company annual reports and SEC filings, the Internal Revenue Service (IRS), and BAAQMD.

Economic Profile of Affected Industries

In total, there are five establishments assumed to be impacted by the plan requirements of Rule 12-13 and three by Rule 6-4. The affected businesses are so few, and are not necessarily representative of their entire NAICS sector as discussed above. Based on information from company annual reports, published news articles, and from InfoUSA and Hoover's/Dun & Bradstreet (two private vendors offering company information including corporate structure and estimates of employment and earnings), the affected establishments have estimated annual sales ranging from $7.5 million to over $100 million, and employment ranging from 25 to over 700 employees.

Estimated Rate of Return

The IRS provides data on total sales and net income for three industry groups that cover the establishments impacted by these proposed rules. According to IRS data, the 10 year average rates of return range from 3.6 percent to 5.6 percent for the affected industries, as shown in Table 5. Schnitzer Steel in Oakland (NAICS 423930), one of the recycling establishments, is a public corporation, and while the rate of return for this particular location is not public information, Schnitzer's overall return for their metal recycling business is 5.3 percent, based on income and gross revenues from their 2011 Annual Report. SIMS Metals is also a publicly listed, global corporation headquartered in Australia. SIMS reported a net loss from all operations in their 2012 annual report. It should be noted that the IRS category that most closely matches the recycling establishments businesses affected by Rule 6-4 is a catch-all category that includes a number of other miscellaneous wholesalers.

Table 5: Profit Ratios for Impacted Industries

NAICS 331221

Iron, steel mills and steel product

Total Receipts	$1,062,501,214
Net Income	$59,667,028
Profit Ratio	5.6%

NAICS 331314

Nonferrous metal production and processing

Total Receipts	$783,370,143
Net Income	$40,302,371
Profit Ratio	5.1%

NAICS 331511 and 331513

Foundries

Total Receipts	$200,882,789
Net Income	$10,982,400
Profit Ratio	5.5%

NAICS 423930 and 423940

Furniture, sports, toys, recycle, jewelry, and other durable goods

Total Receipts	$2,293,791,368
Net Income	$82,972,361
Profit Ratio	3.6%

Note: Uses industry classifications from IRS Table that most closely match the affected establishments.
Sources: IRS 1999-2008 Returns of Active Corporations Table; BAE, 2012.

Description of Compliance Costs

Each of these facilities is distinct from the others in its operations, configuration, and location. As a result, BAAQMD is not attempting to describe the exact emissions minimization measures that might be put in place for each establishment. Instead, the operator of each facility will be required to evaluate its own operations and conditions to determine what is best to reduce fugitive emissions from an operational and cost perspective.

As a result, BAAQMD has developed case studies describing a range of potential measures which do not necessarily represent the costs each facility would incur, but they are analyzed here to provide a general idea of the order of magnitude of the costs relative to the estimated revenues and profit levels for these facilities. The case study examples of emissions minimization measures that might be employed are as follows:

1. Minimization of Air Drafts for Metal Finishing Operations
2. Upgrading PM10 Emissions Capture and Control Systems at a Foundry
3. Shakers to Reduce Trackout onto Public Roadways
4. Reducing Fugitive PM10 Emissions from Transfer Operations at a Metal Recycling Facility
5. Dust Control for Open Spaces and Stockpiles Using Industrial Misters
6. Erecting Screened Fences as Wind Barriers in a 10 Acre Facility
7. Switching to Lower VOC Binder Formulation

The first two measures and measure seven would be applicable for the foundries and forging operations; measures three through five would apply to the scrap recycling facilities, and measure six could be applicable for either type of facility.

Costs for each of these measures have been estimated by BAAQMD staff as shown in Table 6.

Table 6: Compliance Costs

Case Study 1: Minimization of Air Drafts for Metal Finishing Operations

	Total Costs	Annualized Costs
Construction - Enclosure 20' x 10' 10'		
Capital Costs	$25,000	$3,238
Annual Operating Costs	$0	$0
Total Costs	*$25,000*	*$3,238*

Case Study 2: Upgrading PM10 Emissions Capture and Control Systems at a Foundry

	Total Costs	Annualized Costs
Upgrade existing emissions control system		
Capital Costs	$1,100,000	$193,000
Annual Operating Costs	$267,000	$267,000
Total Costs	*$1,367,000*	*$460,000*

Case Study 3: Shakers to Reduce Trackout onto Public Roadways

	Total Costs	Annualized Costs
Install shakers for outgoing vehicles at scrap facilities		
Capital Costs	$5,000	$5,000 (a)
Annual Operating Costs	$0	$0
Total Annualized Costs	*$5,000*	*$5,000*

Case Study 4: Reducing Fugitive PM10 Emissions from Transfer Operations at a Metal Recycling Facility

	Total Costs	Annualized Costs
Conveyor System		
Total Annualized Costs	*$206,500*	*$41,672*

Case Study 5: Dust Control for Open Spaces and Stockpiles Using Industrial Misters

	Total Costs	Annualized Costs
Dust Control with Industrial Misters		
Capital Costs (for a 5-acre facility)	$126,300	$16,236
Annual Operating Costs	$539,050	$539,050
Total Annualized Costs	*$665,350*	*$555,286*

Case Study 6: Erecting Screened Fences as Wind Barriers (10-Acre Parcel)

	Total Costs	Annualized Costs
Erect Fences to Reduce Wind - 22 foot high fence		
Capital Costs	$940,000	$120,000
Annual Operating Costs	$0	$0
Total Annualized Costs	*$940,000*	*$120,000*

Case Study 7: Switching to Lower VOC Binder Formulation

	Total Costs	Annualized Costs
Switch from Pepset to Techniset two-part binder system		
Total Annualized Costs	*$0*	*$0*

Notes:

Capital costs have been annualized based on a capital cost factor of 0.1295, based on a 5% interest rate applied over 10 years. In some cases, the costs are presented in an annualized form by BAAQMD directly.

(a) Because of the small cost here, this is presented as a one time expenditure. Thus, any impact would be minimal and only in the year of purchase.

Sources: BAAQMD, 2012; BAE, 2012.

Economic Impacts Analysis for Affected Industries

In order to determine the impacts of these measures on the eight locations, this analysis compares annualized compliance costs (as shown in Table 6 above) to annual profits.

For each applicable measure separately, the analysis then calculates the compliance costs as a percentage of profits to determine the level of impact. BAAQMD uses the ARB's 10 percent threshold as a proxy for burden. Annualized compliance costs resulting in profit losses of 10 percent or more indicate that the proposed compliance measure has the potential for significant adverse economic impacts. Table 7 shows the estimated annualized compliance costs as a share of total profits for each measure for each establishment. To preserve confidentiality, the businesses are not referred to directly by name, but as "Facility A," Facility B," and so on through "Facility H."

As Table 7 shows, annualized compliance costs for each of the following measures are below the 10 percent burden threshold for all locations considered for each of the following measures:

- Case Study 1: Minimization of Air Drafts for Metal Finishing Operations
- Case Study 3: Shakers to Reduce Trackout onto Public Roadways
- Case Study 4: Reducing Fugitive PM10 Emissions from Transfer Operations at a Metal Recycling Facility
- Case Study 7: Switching to Lower VOC Binder Formulation

Annualized compliance costs for each of the following measures are above the 10 percent burden threshold for all locations considered for the following measures:

- Case Study 5: Dust Control for Open Spaces and Stockpiles Using Industrial Misters

For each of the following measures, the results relative to the cost threshold were mixed, with some facilities above and some below the threshold:

- Case Study 2: Upgrading PM10 Emissions Capture and Control Systems at a Foundry
- Case Study 6: Erecting Screened Fences as Wind Barriers

For Case Study 2, Upgrading PM10 Emissions Capture and Control Systems at a Foundry, four of the five facilities showed costs above the 10 percent threshold. For Case Study 6, Erecting 22' Screened Fences as Wind Barriers, three of the eight facilities were below the 10 percent threshold.

It should be noted that as case studies, costs in some cases are based on certain assumptions about sizing, but in reality the costs might vary based on the needs of a particular facility, e.g., the size of a fenced yard might vary from that assumed here.

Table 7: Compliance Costs as Share of Profit

Case Study 1: Minimization of Air Drafts for Metal Finishing Operations

	Estimated Annual Sales	Estimated Return on Sales	Estimated Annual Profits	Compliance Cost	Share of Annual Profit
Facility A	$7,500,000	5.1%	$385,900	$3,238	0.8%
Facility B	$25,000,000	5.5%	$1,366,800	$3,238	0.2%
Facility C	$20,000,000	5.5%	$1,093,400	$3,238	0.3%
Facility D	$30,000,000	5.5%	$1,640,100	$3,238	0.2%
Facility E	$100,000,000	5.6%	$5,615,700	$3,238	0.1%

Case Study 2: Upgrading PM10 Emissions Capture and Control Systems at a Foundry

	Estimated Annual Sales	Estimated Return on Sales	Estimated Annual Profits	Compliance Cost	Share of Annual Profit
Facility A	$7,500,000	5.1%	$385,900	$460,000	119.2%
Facility B	$25,000,000	5.5%	$1,366,800	$460,000	33.7%
Facility C	$20,000,000	5.5%	$1,093,400	$460,000	42.1%
Facility D	$30,000,000	5.5%	$1,640,100	$460,000	28.0%
Facility E	$100,000,000	5.6%	$5,615,700	$460,000	8.2%

Case Study 3: Shakers to Reduce Trackout onto Public Roadways

	Estimated Annual Sales	Estimated Return on Sales	Estimated Annual Profits	Compliance Cost	Share of Annual Profit
Facility F	$20,000,000	3.6%	$723,500	$5,000	0.7%
Facility G	$30,000,000	3.6%	$1,085,200	$5,000	0.5%
Facility H	$20,000,000	3.6%	$723,500	$5,000	0.7%

Case Study 4: Reducing Fugitive PM10 Emissions from Transfer Operations at a Metal Recycling Facility

	Estimated Annual Sales	Estimated Return on Sales	Estimated Annual Profits	Compliance Cost	Share of Annual Profit
Facility F	$20,000,000	3.6%	$723,500	$41,672	5.8%
Facility G	$30,000,000	3.6%	$1,085,200	$41,672	3.8%
Facility H	$20,000,000	3.6%	$723,500	$41,672	5.8%

Case Study 5: Dust Control for Open Spaces and Stockpiles Using Industrial Misters

	Estimated Annual Sales	Estimated Return on Sales	Estimated Annual Profits	Compliance Cost	Share of Annual Profit
Facility F	$20,000,000	3.6%	$723,500	$555,286	76.7%
Facility G	$30,000,000	3.6%	$1,085,200	$555,286	51.2%
Facility H	$20,000,000	3.6%	$723,500	$555,286	76.7%

Case Study 6: Erecting 22' Screened Fences as Wind Barriers

	Estimated Annual Sales	Estimated Return on Sales	Estimated Annual Profits	Compliance Cost	Share of Annual Profit
Facility A	$7,500,000	5.1%	$385,900	$120,000	31.1%
Facility B	$25,000,000	5.5%	$1,366,800	$120,000	8.8%
Facility C	$20,000,000	5.5%	$1,093,400	$120,000	11.0%
Facility D	$30,000,000	5.5%	$1,640,100	$120,000	7.3%
Facility E	$100,000,000	5.6%	$5,615,700	$120,000	2.1%
Facility F	$20,000,000	3.6%	$723,500	$120,000	16.6%
Facility G	$30,000,000	3.6%	$1,085,200	$120,000	11.1%
Facility H	$20,000,000	3.6%	$723,500	$120,000	16.6%

Case Study 7: Switching to Lower VOC Binder Formulation – no cost

Sources: Company SEC Filings; Dun & Bradstreet; InfoUSA; IRS; BAAQMD, 2012; BAE, 2012.

Affected Industries and Regional Employment Impacts

While some of the case study solutions appear to have compliance costs that are greater than 10 percent of annual profits, the structure of these rules is driven by the EMP, which would be developed by each business and as such, would exclude solutions that are not considered financially feasible by the business and District. As a result, no employment impacts are anticipated due to implementation of these rules.

Regional Indirect and Induced Impacts

Indirect and induced impacts refer to regional multiplier effects of increasing or decreasing regional economic activity. If the proposed Rules were to significantly impact local businesses, any closures would result in direct regional economic losses. Firms would no longer buy goods from local suppliers, thereby resulting in reduced indirect impacts, or business-to-business expenditures. In addition, businesses would no longer employ regional residents, resulting in reduced induced impacts in the form of household spending.

While some of the proposed solutions would appear to result in significant direct impacts, the approach to this rule is to allow the affected businesses to suggest and utilize solutions that would be financially feasible, i.e., they would not be required to implement solutions that might result in closure and significant direct impacts. As a result, the rule adoption would not result in any foreseeable indirect or induced impacts either.

IMPACT ON SMALL BUSINESSES

According to California Government Code 14835, a small business is any business that meets the following requirements:

- Must be independently owned and operated;
- Cannot be dominant in its field of operation;
- Must have its principal office located in California;
- Must have its owners (or officers in the case of a corporation) domiciled in California; and
- Together with its affiliates, be either:
    - A business with 100 or fewer employees, and an average annual gross receipts of $10 million or less over the previous three tax years, or
    - A manufacturer with 100 or fewer employees.

Most of these establishments are not independently owned, or are too large to quality as small businesses under these criteria. There is one possible exception among the establishments under consideration here, but it appears that the company has smaller branch locations that put it over the employment and gross receipts thresholds.

Appendix C

California Environmental Quality Act
Initial Analysis and Negative Declaration

Initial Study/Negative Declaration for the Bay Area Air Quality Management District

Regulation 12, Rule 13: Foundry and Forging Operations

And

Regulation 6, Rule 4: Metal Recycling and Shredding Operations

Prepared for:

Bay Area Air Quality Management District
939 Ellis Street
San Francisco, CA 94109
Contact: Victor Douglas
(415) 749-4752

Prepared By:

Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92870
Contact: Debra Bright Stevens
(714) 632-8521

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Chapter 1

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Chapter 3

FIGURES:

TABLES:

CHAPTER 1

Introduction

1.1 PURPOSE OF THIS DOCUMENT

This Negative Declaration assesses the environmental impacts of the proposed adoption of Regulation 12, Rule 13: Foundry and Forging Operations, and Regulation 6, Rule 4: Metal Recycling and Shredding Operations (Regulations 12-13 and 6-4), by the Bay Area Air Quality Management District (BAAQMD or District). This assessment is required by the California Environmental Quality Act (CEQA) and in compliance with the state CEQA Guidelines (Title 14 California Code of Regulations §15000 et seq.). A Negative Declaration serves as an informational document to be used in the decision-making process for a public agency that intends to carry out a project; it does not recommend approval or denial of the project analyzed in the document. The BAAQMD is the lead agency under CEQA and must consider the impacts of the proposed new rules when determining whether to adopt them. The BAAQMD has prepared this Negative Declaration because no significant adverse impacts are expected to result from the proposed Regulations 12-13 and 6-4.

1.2 SCOPE OF THIS DOCUMENT

This document evaluates the potential impacts of the proposed amendments on the following resource areas:

- aesthetics,
- agriculture and forestry resources,
- air quality,
- biological resources,
- cultural resources,
- geology / soils,
- greenhouse gas emissions,
- hazards & hazardous materials,
- hydrology / water quality,
- land use / planning,
- mineral resources,
- noise,
- population / housing,

- public services,
- recreation,
- transportation / traffic, and
- utilities / service systems.

1.3 IMPACT TERMINOLOGY

The following terminology is used in this Initial Study/Negative Declaration to describe the levels of significance of impacts that would result from the proposed rule amendments:

- An impact is considered *beneficial* when the analysis concludes that the project would have a positive effect on a particular resource.
- A conclusion of *no impact* is appropriate when the analysis concludes that there would be no impact on a particular resource from the proposed project.
- An impact is considered *less than significant* if the analysis concludes that an impact on a particular resource topic would not be significant (i.e., would not exceed certain criteria or guidelines established by BAAQMD). Impacts are frequently considered less than significant when the changes are minor relative to the size of the available resource base or would not change an existing resource.
- An impact is considered *less than significant with mitigation incorporated* if the analysis concludes that an impact on a particular resource topic would be significant (i.e., would exceed certain criteria or guidelines established by BAAQMD), but would be reduced to a less than significant level through the implementation of mitigation measures.

1.4 ORGANIZATION OF THIS DOCUMENT

The content and format of this document, described below, are designed to meet the requirements of CEQA.

- Chapter 1, "Introduction," identifies the purpose, scope, and terminology of the document.
- Chapter 2, "Description of the Proposed Rule," provides background information of Regulation 12, Rules 13 and 14, describes the proposed rule amendments, and describes the area and facilities that would be affected by the amendments.
- Chapter 3, "Environmental Checklist," presents the checklist responses for each resource topic. This chapter includes a brief setting description for each resource area and identifies the impact of the proposed rule amendments on the resources topics listed in the checklist.

- Chapter 4, "References Cited," identifies all printed references and personal communications cited in this report.

CHAPTER 2

Description of the Proposed Rule

2.1 BACKGROUND

The BAAQMD regulates particulate matter (PM) (including toxic metals that are toxic air contaminants), volatile organic compounds (VOC) (including toxic and odorous substances), and other pollutants from foundry and forging operations and metal recycling and shredding operations under a variety of District regulations. Foundries in the Bay Area are subject to many air pollution control regulations which largely depend on the types of metals processed and the pollutants emitted. In addition to District rules, foundries are subject to a State Airborne Toxic Control Measure (ATCM) and at least five National Emissions Standards for Hazardous Air Pollutants (NESHAP). District rules that impact foundry and forging operations and metal recycling and shredding operations include Regulation 1: General Provisions and Definitions, Regulation 2: Rule 1: General Requirements, Rule 2: New Source Review, Rule 5: New Source Review of Toxic Air Contaminants, and Rule 6: Major Facility Review, Regulation 6: Particulate Matter, Rule 1: General Requirements, and Regulation 7: Odorous Substances.

The BAAQMD has identified approximately 20 facilities that conduct foundry or forging operations in the District. These facilities can sometimes also contain metal recycling operations. Foundries and forges process "ferrous" metals, "non-ferrous" metals, or a combination of both. Ferrous metals and alloys have iron as the largest metal component. Non-ferrous metals and alloys contain metal(s) other than iron as the major (base) component, e.g., aluminum, copper, magnesium, zinc, brass, and bronze.

The BAAQMD has identified over 100 facilities that conduct metal recycling operations and two facilities that conduct shredding of automobiles and other materials in the Bay Area. Metal recycling facilities collect, sort and recycle scrap metal collected from peddlers and scrap yards and other satellite facilities. Scrap metal includes ferrous and non-ferrous metals. The scrap metal must be shredded and the various ferrous and non-ferrous metals segregated from each other and other non-metallic materials.

All of these operations have associated with them some degree of emissions, such as PM, including metals; VOCs (including odorous compounds such as phenols and creosols); and/or toxics compounds. Emissions data and other compliance information allow these facilities to be segregated into three types of emissions sources:

- Criteria pollutants and precursors:
  - VOCs
  - PM

- Toxic Emissions
- Nuisance / Odors
  - Phenol and associated compounds
  - Creosol and associated compounds

The casting of molten metals is the primary emission source of PM and odorous substances such as phenolic compounds at foundries. These emissions occur when the hot molten metals contact the molds and cores that are often formulated with binders that contain organic compounds. Metal forges can emit PM and odorous substances. Operations at metal recycling facilities result in the emissions of PM and visible emissions from metal management and shredding operations, including resultant shredder residue.

2.2 OBJECTIVES

The objective of the proposed Regulation 12, Rule 13: Foundry and Forging Operations (Rule 12-13) and Regulation 6, Rule 4: Metal Recycling and Shredding Operations (Rule 6-4) is to reduce fugitive emissions of PM, including toxic air contaminants, and odorous substances from foundry and forging operations and metal recycling and shredding operations, in order to reduce PM concentrations in the Bay Area and reduce the impacts of fugitive PM emissions and odor complaints on surrounding neighborhoods.

The Bay Area is not in attainment of State particulate matter standards and further reductions in PM are needed to ensure compliance with federal standards.[1] Odorous substances in foundry operations may sometimes be toxic air contaminants. PM and odorous substance emission reductions can be achieved by abatement from point sources, fugitive capture enhancement, and pollution prevention practices.

The U.S. EPA has set primary national ambient air quality standards for air pollutants to define the levels considered safe for human health. The California Air Resources Board (CARB) has also set California ambient air quality standards. The Bay Area is a non-attainment area for the state one-hour ozone standard and federal eight-hour ozone standard. In addition, the Bay Area is not in attainment of California ambient air standards for particulate matter of 10 microns or less (PM10) or for particulate matter of 2.5 microns or less (PM2.5). Under State law, non-attainment areas must prepare plans showing how they will attain the state standards. The BAAQMD has prepared, approved and is currently implementing, the 2010 Clean Air Plan (CAP) which provides a plan to show how the district will meet applicable air quality standards. The CAP included SSM-1, which considered emission reductions of organic compounds, fine particulates, toxic compounds, and odor from metal melting facilities (foundries).

[1] On October 29, 2012, EPA issued a Notice of Proposed Rulemaking that found that the Bay Area has met the 24-hour National Ambient Air Quality Standard for PM2.5. The BAAQMD will not seek redesignation to attainment for this pollutant at this time, however, as seasonal variation may impact future year compliance.

2.3 RULE AMENDMENTS BEING CONSIDERED

The District is drafting two new rules that would address fugitive emissions of PM and odorous substances from foundries and forges and major metal recycling/shredding facilities in the Bay Area: proposed Regulation 12, Rule 13: Foundry and Forging Operations (Rule 12-13) and proposed Regulation 6, Rule 4: Metal Recycling and Shredding Operations (Rule 6-4). Both of these rules would rely on the implementation of management procedures through the development of Emissions Minimization Plans (EMP) to minimize fugitive emissions. The reliance on the development of an EMP allows each facility to tailor its approach to reducing or minimizing emissions to the unique conditions and configuration of its affected operations.

Rule 12-13 would address fugitive emissions from several general processes of metal melting and casting and associated operations, including:

- Mold and core making;
- Furnace / oven (including tapping);
- Heat treatment of metals;
- Casting and cooling;
- Shake out;
- Finishing;
- Sand reclamation;
- Dross and slag management; and
- Metal management.

Rule 6-4 would focus on reducing fugitive emissions from metal recycling facilities that compile, shred, and sort scrap metal for resale, including the following operations:

- Metal management; and
- Shredding operations, including minimization of automotive shredder residue (ASR) or "fluff.

2.3.1 PROPOSED RULE 12-13: FOUNDRY AND FORGING OPERATIONS

Proposed Rule 12-13: Foundry and Forging Operations would affect foundries and forges. The proposed rule primarily relies upon the development and implementation an EMP that would include practices and procedures to minimize fugitive emissions of PM, visible emissions, and odors. The EMP would ensure that affected facilities employ the best means available to address fugitive emissions and point source emissions that are not fully addressed by the applicable federal rules (NESHAPs).

2.3.1.1 Applicability

Rule 12-13 would affect the facilities that either melt metals (foundries) or heat treat metals (forges). The rule would apply to these operations that require a District permit. Facilities with an annual metal throughput (metal charged to a furnace or heated in an

oven) of 2,500 tons or more per year would be subject to all of the requirements of the rule; those facilities with a throughput between one and 2,500 tons would only be required to keep records on their annual metal throughput. This rule would address those facilities with the greatest potential for emissions of PM and odorous substances.

2.3.1.2 Emission Limits

Rule 12-13 would contain no emissions limits. The District would rely upon the emissions limits already contained in Regulation 11 - Hazardous Pollutants, Rule 15 - Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting, and the five applicable NESHAPs that affect metal melting operations:

1. Subpart RRR—National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production.

2. Subpart EEEEE—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries.

3. Subpart YYYYY—National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities.

4. Subpart ZZZZZ—National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources.

5. Subpart ZZZZZZ—National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries.

The District believes that the emissions limits contained in these various regulations effectively address process emissions of PM at this time. The District will seek delegation from the US EPA, so that the District would be the enforcing agency for these regulations.

2.3.1.3 Development and Implementation of the Emissions Minimization Plan

Rule 12-13 would require affected facilities to develop and submit to the District for approval an EMP that would detail the practices that have been or will be implemented to minimize fugitive emissions from the following operations and materials:

1. Mold and core making;

2. Metal melting and tapping;

3. Heat treatment of metals;

4. Casting and cooling;

5. Shake-out;

6. Finishing;

7. Sand reclamation;

8. Dross and slag management; and

9. Metal management, including, scrap metal acceptance and handling (to minimize contaminants such as lead, mercury, PCBs, and plastics).

Rule 12-13 would require that affected facilities submit an EMP to the District within one year of the adoption of the rule or within six months of becoming subject to the rule.

2.3.1.4 Evaluation of EMP

Within 30 days of receiving a draft EMP, the District will determine if the EMP is complete, i.e., whether it has addressed all the relevant areas for the facility. If the EMP is not complete, the District would notify the facility that the EMP is not complete and the basis of this determination. Upon receipt of notification of an incomplete EMP, the facility would have 30 days to correct any deficiencies and resubmit the draft EMP. If the District determines that the deficiencies are not corrected, the District would disapprove the EMP. If the EMP is complete, the District would make it available for 30 days for public comment, although this period may be extended at the discretion of the District. Within 30 days of the close of the public comment period, the District would consider comments submitted by the public and may make recommendations – based on technical and economic feasibility – for further revisions to the EMP by the facility to reduce or prevent fugitive emissions.

2.3.1.5 Revision and Approval of the Final EMP

After receiving any District recommendations, the facility would have 30 days to resubmit a revised final EMP reflecting the recommended changes or (in the absence of incorporating the recommendations) an EMP accompanied by written reasons explaining why each specific recommendation was not incorporated into the EMP. Within 30 days of the receipt of the final EMP, the District would review the EMP and determine whether or not it meets the requirements of Rule 12-13. If the District determined that the EMP provides emissions minimization procedures for all affected operations and includes all required elements, the EMP would be approved. If it were determined that all elements were not included, the District would notify the facility of its decision and the basis. The facility would have 30 days to correct the deficiencies in the EMP and resubmit it for approval. If the District finds that that facility failed to correct the deficiencies, the District would disapprove the EMP.

If the District determines that the EMP meets the requirements of the Rule, the District would approve the EMP and provide written notice to the facility of the approval. Then the facility would have 90 days to implement the provisions of the approved EMP. The elements of the EMP would become enforceable under the Rule.

2.3.1.6 Reporting Requirements

Intended Emission Reduction Projects: Along with the EMP, affected facilities would be required to report to the District any equipment, processes or procedures that would be installed or implemented within the next five years to reduce or prevent fugitive

emissions along with a schedule of implementation. This report would be independent of the EMP and considered a forecast of efforts intended by the facility and may be subject to change by the facility.

Reporting Requirements for Emissions Capture/Collection Systems Required Under the NESHAPs or Non-Ferrous Metal Melting ATCM: Facilities subject to the Non-Ferrous Metal Melting ATCM or one of the four federal NESHAPs that require the installation of an emissions capture/collection system capable of meeting "accepted engineering standards, such as those published by the American Conference of Governmental Industrial Hygienists" would be required to report to the District which of the NESHAP and ATCM provisions and the manner in which these requirements are met. The specific sections are:

- 40 CFR Part 63, Subpart RRR: NESHAP for Secondary Aluminum Production, §§63.1506(c)(1) through (c)(3) Capture/collection systems design, installation, and operation;
- 40 CFR Part 63, Subpart EEEEE: NESHAP for Major Source Iron and Steel Foundries, §63.7690(b)(1);
- 40 CFR Part 63, Subpart YYYYY: NESHAP for Area Sources: Electric Arc Furnace Steelmaking Facilities, §63.10686;
- 40 CFR Part 63, Subpart ZZZZZ: NESHAP for Iron and Steel Foundries Area Sources, §63.10895(b);
- Regulation 11: Hazardous Pollutants, Rule 15: Airborne Toxic Control Measure for Emissions of Toxic Metals from Non-Ferrous Metal Melting, §§11-15 (b)(1) and (b)(3).

Reporting Requirements for Operations and Maintenance Plans: The proposed rule also requires facilities subject to one of the five federal NESHAP regulations that require the development of operation and maintenance (O&M) plans to submit a copy of those approved O&M plans to the District within six months of the adoption of the Rule. The specific sections are:

- 40 CFR Part 63, Subpart RRR: NESHAP for Secondary Aluminum Production, §63.1510(b);
- 40 CFR Part 63, Subpart EEEEE: NESHAP for Major Source Iron and Steel Foundries, §63.7710(b);
- 40 CFR Part 63, Subpart YYYYY: NESHAP for Area Sources - Electric Arc Furnace Steelmaking Facilities, §63.10685(a) and (b);
- 40 CFR Part 63, Subpart ZZZZZ: NESHAP for Iron and Steel Foundries Area Sources, §63.10896;
- 40 CFR Part 63, Subpart ZZZZZZ: NESHAP: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, §63.11550(a)(3).

Review of Alternative Binder Formulations: Affected facilities that use mold and core binders made with odorous substances, defined as phenol and phenolic compounds, would be required to investigate the availability and efficacy of alternative binders that produce fewer emissions of odorous substances than currently used at that facility. The facility would have to complete and report the results of this investigation to the District no later than two years after the adoption of the Rule and again before each two year anniversary of the receipt of the initial report.

Clean Aluminum Exemption: Die casting facilities that melt only aluminum or other alloy, excluding lead, solder and zinc scrap that certifiably contains less than 0.004 percent cadmium and 0.002 percent arsenic would be exempt from the EMP development and all other requirements, except certain reporting requirements of the proposal. However, to retain this exemption, the facilities must maintain records certifying the cleanliness of the aluminum used. This exemption is intended to duplicate an exemption in the Non-Ferrous Metal Melting ATCM.

2.3.2 PROPOSED RULE 6-4: METAL RECYCLING AND SHREDDING OPERATIONS

Proposed Rule 6-4: Metal Recycling and Shredding Operations would also rely upon the development and implementation an EMP that would include practices and procedures to minimize fugitive emissions of PM. However, proposed Rule 6-4 differs from proposed Rule 12-13 in that it applies specifically to scrap metal recycling and shredding operations and focuses on those operations and materials specific to this industry.

2.3.2.1 Applicability

Proposed Rule 6-4 would apply to scrap metal recycling facilities that receive at least 1,000 tons of scrap metal per year. Metal recycling facilities with an annual metal throughput of 50,000 tons or more would be subject to the general requirements of the rule; those recycling facilities with an annual metal throughput between 50,000 and 1,000 tons would only be required to keep records of their annual metal throughput. Based on this applicability, the general requirements of Rule 6-4 would apply to only three Bay Area metal recycling operations: Schnitzer Steel at the Port of Oakland and Sims Metals at the Port of Redwood City and at the Port of Richmond. Two of these facilities operate large-scale shredders that size and sort scrap metal and the other is a large-scale metal recycling operation.

2.3.2.2 Emission Limits

Like Rule 12-13, draft Rule 6-4 does not contain emission limits – there are no federal NESHAPs that apply to this industry, with the exception of the Subpart T—National Emission Standards for Halogenated Solvent Cleaning and the Subpart B—Servicing of Motor Vehicle Air Conditioners for refrigerants which are currently addressed in District Regulation 8, Rule 16: Solvent Cleaning Operations and Regulation 12, Rule 7: Motor Vehicle Air Conditioner Refrigerant, respectively. These rules would only apply to these

facilities if they operate solvent cleaning apparatus using one of the six regulated chemicals or remove air conditioning refrigerant from automobiles. However, the shredding operations are subject to District Regulation 6, Rule 1: Particulate Matter, General Requirements and have permit limits that address process PM emissions from these operations.

2.3.2.3 Development and Implementation of Minimization Plans

Like draft Rule 12-13, § 6-4-401 of Rule 6-4 would require affected facilities to develop and implement an EMP that would detail the practices and equipment that have been or will be implemented to minimize fugitive emissions from the following operations, areas, and materials:

- Roadways and other trafficked areas.
- Scrap metal, including: (1) Handling and storage operations; (2) Crushing operations; (3) sorting operations; and (4) shredding / hammermill operations.
- Receipt of scrap metal from providers.
- Auto shredder residue.
- Depollution operations, including those addressing removal of lead batteries, polychlorinated biphenyl capacitors, mercury switches, sodium azide canisters, free liquids, and lead tire weights.
- Lead batteries.
- Polychlorinated biphenyl capacitors.
- Mercury switches.
- Sodium azide canisters.

2.3.2.4 Evaluation of the Emission Minimization Plans

Within 30 days of receiving a draft EMP, the District will determine if the EMP is complete, i.e., whether it has addressed all the relevant areas for the facility. If the EMP is not complete, the District would notify the facility that the EMP is not complete and the basis of this determination. Upon receipt of notification of an incomplete EMP, the facility would have 30 days to correct any deficiencies and resubmit the draft EMP. If the District determines that the deficiencies are not corrected, the District would disapprove the EMP. If the EMP is complete, the District would make it available for 30 days for public comment. Within 30 days of the close of the public comment period, the District would consider comments submitted by the public and may make recommendations – based on technical and economic feasibility – for further revisions to the EMP by the facility to reduce or prevent fugitive emissions.

2.3.2.5 Revision and Approval of the Final EMP

After receiving any District recommendations, the facility would have 30 days to resubmit a revised final EMP reflecting the recommended changes or (in the absence of incorporating the recommendations) an EMP accompanied by written reasons explaining why each specific recommendation was not incorporated into the EMP. Within 30 days

of the receipt of the final EMP, the District would review the EMP and determine whether or not it meets the requirements of the Rule. If the District determines that the EMP provides emissions minimization procedures for all affected operations and includes all required elements, the EMP would be approved. If the District determines that not all requirements were met, the District would notify the facility of its decision and the basis. The facility would have 30 days to correct the deficiencies in the EMP and resubmit it for approval. If the District finds that that facility failed to correct the deficiencies, the District would disapprove the EMP.

2.3.2.6 Reporting

Along with the EMP, affected facilities would be required to report to the District any equipment, processes or procedures that would be installed or implemented within the next five years to reduce or prevent fugitive emissions along with a schedule of implementation. This report would be independent of the EMP and considered a forecast of efforts intended by the facility and maybe be subject to change.

2.3.2.7 Exemptions

Metal recycling facilities that would have to comply with the EMP requirements of Rule 12-13: Foundry and Forging Operations would not have to develop a separate EMP for the Metal Recycling and Shredding rule provided the requirements for an EMP under draft Rule 12-13-401 and § 6-4-401 were met.

2.3.2.8 Limited Exemption

Metal recycling facilities with an annual metal throughput of 50,000 tons or less would not be required to develop and implement a District-approved EMP. These facilities however, would be required to maintain records on their metal throughput and provide the basis for the throughput determination.

2.3.3 ELIMINATE THE PERMIT EXEMPTION FOR MOLD MAKING EQUIPMENT

Staff also proposes to eliminate the permit exemption for heated shell core and shell mold manufacturing machines in District Regulation 2, Rule 1: General Requirements (Rule 2-1). Currently, shell core and shell mold manufacturing machines are exempt from permits under § 2-1-122.3. Because these machines are sources of emissions of PM and odorous substances and would be regulated under proposed Rule 12-13, their exemption from permit requirements would be removed. The proposed amendment to Rule 2-1 would read as follows:

- Exemption, Casting, and Molding Equipment: The following equipment is exempt from the requirements of 2-1-301 and 302, provided that the source does not require permitting pursuant to 2-1-319.
    a. Molds used for the casting of metals.

b. Foundry sand mold and core-forming equipment, including shell core and shell-mold manufacturing machines, to which no heat is applied, except processes utilizing organic binder yielding in excess of 0.25 percent free phenol by weight of sand.

c. Equipment used for extrusion, compression molding and injection molding of plastics. The use of mold release products or lubricants is not exempt unless the VOC content of these materials is less than or equal to one percent, by weight, or unless the total facility-wide uncontrolled VOC emissions from the use of these materials are less than 150 pounds per year.

d. Die casting machines.

When a source becomes subject to permit requirements by a change in District rules, the operator of that source has 90 days to submit a permit application. Unlike a new source, an Authority to Construct is not required.

2.4 PROPOSED METHOD OF CONTROL

Both of these proposed rules would rely on the implementation of management procedures through the development of EMPs to minimize emissions. The reliance on the development of an EMP allows each facility to tailor its approach to reducing or minimizing emissions to the unique conditions and configuration of its affected operations.

The methods used to reduce the emission of pollutants from any source or operation fall into three main categories: 1) emissions abatement from point sources, such as an exhaust stack from a furnace or engine, through the use of a control such as carbon adsorption systems or fabric filters; 2) fugitive emission reduction through enhanced capture techniques; and 3) pollution prevention practices that can be used to prevent the emissions of a pollutant, such as reformulations and the reuse or recycling of by-products of production.

2.5 POTENTIAL EMISSION REDUCTIONS

The proposed new rules would address fugitive emissions of PM (which may include toxic metals) and odorous substances. The implementation of various federal, state, and District regulations has addressed emissions of pollutants from most point and some fugitive sources located at metal melting and processing facilities and metal recycling facilities. Point sources include exhaust from furnaces, ovens, shredders, and core and mold making apparatus. However, the degree of control of fugitive sources varies. Because of the controls on point sources, fugitive emissions from the metal melting and processing operations comprise a significant portion of the overall emissions from these facilities. Most fugitive emissions are released at ground level. Modeling indicates that these ground level fugitive emissions may have a disproportionately greater impact on nearby receptors than stack emissions. Therefore, reductions in fugitive ground-level

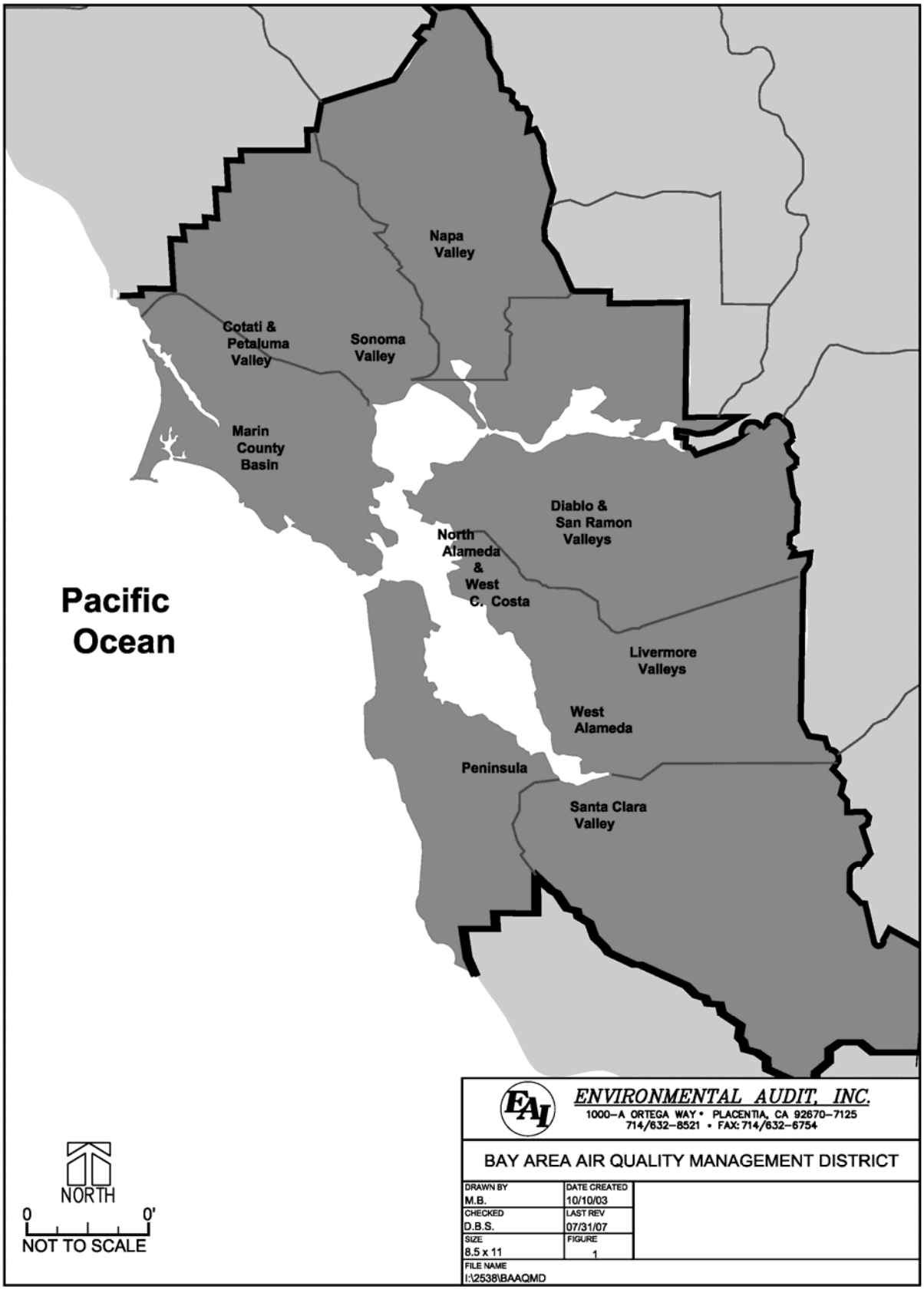
emissions would have a beneficial effect on associated risk relative to an equivalent reduction in stack emissions of the same pollutant. Because stack emissions are currently subject to a high degree of control, these rules are specifically aimed at reducing fugitive emissions that may not be sufficiently addressed.

The proposed new rules address these fugitive emissions through the identification and implementation of site-specific management practices detailed in the EMP developed by each affected facility. Although estimating emissions reductions is difficult, it is estimated that adoption of these rules will reduce PM emissions by 12.2 tons per year.

2.6 AFFECTED AREA

The proposed rules would apply to facilities under BAAQMD jurisdiction. The BAAQMD jurisdiction includes all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma counties (approximately 5,600 square miles). The San Francisco Bay Area is characterized by a large, shallow basin surrounded by coastal mountain ranges tapering into sheltered inland valleys. The combined climatic and topographic factors result in increased potential for the accumulation of air pollutants in the inland valleys and reduced potential for buildup of air pollutants along the coast. The Basin is bounded by the Pacific Ocean to the west and includes complex terrain consisting of coastal mountain ranges, inland valleys, and bays.

BAAQMD proposes to regulate fugitive emissions of PM and odorous substances from foundries and forges and metal recycling and shredding operations. The facilities affected by the proposed rule amendments are located within the jurisdiction of the Bay Area Air Quality Management District (see Figure 1).


Napa Valley
Cotati & Petaluma Valley
Sonoma Valley
Marin County Basin
Diablo & San Ramon Valleys
North Alameda & West C. Costa
Pacific Ocean
Livermore Valleys
West Alameda
Peninsula
Santa Clara Valley
NORTH
0 0'
NOT TO SCALE
ENVIRONMENTAL AUDIT, INC.
1000-A ORTEGA WAY • PLACENTIA, CA 92670-7125
714/632-8521 • FAX: 714/632-6754
BAY AREA AIR QUALITY MANAGEMENT DISTRICT
DRAWN BY M.B.
DATE CREATED 10/10/03
CHECKED D.B.S.
LAST REV 07/31/07
SIZE 8.5 x 11
FIGURE 1
FILE NAME I:\2538\BAAQMD

CHAPTER 3

Environmental Checklist

INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

GENERAL INFORMATION

Project Title:	Bay Area Air Quality Management District (BAAQMD) BAAQMD Draft Regulations 12-13 and 6-4.
Lead Agency Name:	Bay Area Air Quality Management District
Lead Agency Address:	939 Ellis Street San Francisco, California 94109
Contact Person:	Victor Douglas
Contact Phone Number:	415-749-4752
Project Location:	These draft rules apply to the area within the jurisdiction of the Bay Area Air Quality Management District, which encompasses all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties.
Project Sponsor's Name:	Bay Area Air Quality Management District
Project Sponsor's Address:	939 Ellis Street San Francisco, California 94109
General Plan Designation:	Rule 12-13 and 6-4 apply to foundry and forging operations and metal recycling and shredding operations located throughout the District, which are primarily located in land use areas designated as industrial.
Zoning:	Rule 12-13 and 6-4 apply to foundry and forging operations and metal recycling and shredding operations throughout the District, which are primarily located in industrially zoned areas.
Description of Project:	See “Background” in Chapter 2.
Surrounding Land Uses and Setting:	See “Affected Area” in Chapter 2.
Other Public Agencies Whose Approval is Required:	None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "✓" may be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology / Soils
☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials	☐ Hydrology / Water Quality
☐ Land Use / Planning	☐ Mineral Resources	☐ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☐ Transportation / Traffic	☐ Utilities / Service Systems	☐ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

☒ I find the proposed project COULD NOT have a significant effect on the environment, and that a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature: Date:

Printed Name: Date:

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis.

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, Program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063 (c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This checklist is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL CHECKLIST AND DISCUSSION

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
I.	**AESTHETICS.**				
	Would the project:				
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☑
b)	Substantially damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	☐	☐	☐	☑
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☑	☐
d)	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles), so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses.

The proposed new rules focus on PM and VOC emissions from metal melting, recycling and shredding operations and associated facilities. New rules for these metal working operations will affect more than 20 facilities currently operating within the Bay Area. Metal melting, recycling, and shredding operations are generally located in heavy industrial areas. Scenic highways or corridors are generally not located in the vicinity of industrial land uses.

Regulatory Background

Visual resources are generally protected by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

I a-d. The proposed Draft Regulations 12-13 and 6-4 would further reduce fugitive PM and odorous emissions from metal foundries and forges, as well as metal recycling and shredding operations in the Bay Area. The proposed new rules are not expected to require the construction of any major new structures that would be outside of existing metal melting and processing or metal recycling and shredding operations boundaries, and are not expected to result in any adverse aesthetic impacts. The metal melting, recycling, and shredding facilities affected by the proposed new rules are located within existing industrial facilities within the Bay Area, which are not typically located in areas with scenic vistas.

The metal working facilities may install air pollution control equipment such as carbon adsorption systems, fabric filters, or enhanced capture techniques, or enclosures to minimize air draft, fences, and fugitive dust suppression equipment. While this equipment may be visible from surrounding areas, the locations of the affected facilities are highly industrialized, and the equipment will be of the same size and shape, and operate in the same location as existing equipment. Since any new equipment would be similar in size and location to existing equipment, the proposed Regulations 12-13 and 6-4 are not expected to generate significant aesthetic impacts. Therefore, the installation of control equipment within an industrial area is not expected to generate significant adverse impacts on aesthetics.

Additional lighting for safety and security purposes would not be expected to be required on new equipment. New equipment would be placed within the confines of existing facilities and any new light sources would also be located within the confines of existing industrial facilities. Therefore, the proposed Regulations 12-13 and 6-4 are also not expected to generate any new sources of light or glare.

Based upon these considerations, no significant adverse aesthetic impacts are expected from the adoption of Regulations 12-13 and 6-4.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact

II. AGRICULTURE and FOREST RESOURCES.

In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.--Would the project:

a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☑
b)	Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	☐	☐	☐	☑
c)	Conflict with existing zoning for, or cause rezoning of, forest land as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☑
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☑
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. Some of these agricultural lands are under Williamson Act contracts.

The proposed new rules will affect metal melting, recycling and shredding operations within the Bay Area. These facilities are primarily located in industrialized areas. Agricultural or forest resources are typically not located within these industrialized areas within the Bay Area.

Regulatory Background

Agricultural and forest resources are generally protected by the City and/or County General Plans, Community Plans through land use and zoning requirements, as well as any applicable specific plans, ordinances, local coastal plans, and redevelopment plans.

Discussion of Impacts

II a-e. The proposed Regulations 12-13 and 6-4 would further reduce fugitive PM and odorous emissions from metal foundries and forges, and from metal recycling and shredding operations. The affected facilities are located in industrial areas where no agricultural or forest resources are located. The metal working facilities operating within the Bay Area may comply with Regulations 12-13 and 6-4 by installing air pollution control equipment and implementing Emission Minimization Plans (EMP). Any facility changes would be made within the confines of the existing industrial facilities. No development outside of existing industrial facilities would be required by the proposed new rules, and no agricultural or forest land resources would be impacted.

Based upon these considerations, no significant adverse impacts to agricultural and forest resources are expected from the adoption of Regulations 12-13 and 6-4.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY.				
When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☑
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☐	☐	☑
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☑
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☑
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☑

Setting

Meteorological Conditions

The summer climate of the West Coast is dominated by a semi-permanent high centered over the northeastern Pacific Ocean. Because this high pressure cell is quite persistent, storms rarely affect the California coast during the summer. Thus the conditions that persist along the coast of California during summer are a northwest air flow and negligible precipitation. A thermal low pressure area from the Sonoran-Mojave Desert also causes air to flow onshore over the San Francisco Bay Area much of the summer.

In winter, the Pacific High weakens and shifts southward, upwelling ceases, and winter storms become frequent. Almost all of the Bay Area's annual precipitation takes place in the November through April period. During the winter rainy periods, inversions are weak or nonexistent, winds are often moderate and air pollution potential is very low. During winter periods when the

Pacific high becomes dominant, inversions become strong and often are surface based; winds are light and pollution potential is high. These periods are characterized by winds that flow out of the Central Valley into the Bay Area and often include tule fog.

Topography

The San Francisco Bay Area is characterized by complex terrain consisting of coastal mountain ranges, inland valleys, and bays. Elevations of 1,500 feet are common in the higher terrain of this area. Normal wind flow over the area becomes distorted in the lower elevations, especially when the wind velocity is not strong. This distortion is reduced when stronger winds and unstable air masses move over the areas. The distortion is greatest when low level inversions are present with the surface air, beneath the inversion, flowing independently of the air above the inversion.

Winds

In summer, the northwest winds to the west of the Pacific coastline are drawn into the interior through the Golden Gate and over the lower portions of the San Francisco Peninsula. Immediately to the south of Mount Tamalpais, the northwesterly winds accelerate considerably and come more nearly from the west as they stream through the Golden Gate. This channeling of the flow through the Golden Gate produces a jet that sweeps eastward but widens downstream producing southwest winds at Berkeley and northwest winds at San Jose; a branch curves eastward through the Carquinez Straits and into the Central Valley. Wind speeds may be locally strong in regions where air is channeled through a narrow opening such as the Carquinez Strait, the Golden Gate, or San Bruno Gap.

In winter, the Bay Area experiences periods of storminess and moderate-to-strong winds and periods of stagnation with very light winds. Winter stagnation episodes are characterized by outflow from the Central Valley, nighttime drainage flows in coastal valleys, weak onshore flows in the afternoon and otherwise light and variable winds.

Temperature

In summer, the distribution of temperature near the surface over the Bay Area is determined in large part by the effect of the differential heating between land and water surfaces. This process produces a large-scale gradient between the coast and the Central Valley as well as small-scale local gradients along the shorelines of the ocean and bays. The winter mean temperature high and lows reverse the summer relationship; daytime variations are small while mean minimum nighttime temperatures show large differences and strong gradients. The moderating effect of the ocean influences warmer minimums along the coast and penetrating the Bay. The coldest temperatures are in the sheltered valleys, implying strong radiation inversions and very limited vertical diffusion.

Inversions

A primary factor in air quality is the mixing depth, i.e., the vertical dimension available for dilution of contaminant sources near the ground. Over the Bay Area, the frequent occurrence of temperature inversions limits this mixing depth and consequently limits the availability of air for dilution. A temperature inversion may be described as a layer or layers of warmer air over cooler air.

Precipitation

The San Francisco Bay Area climate is characterized by moderately wet winters and dry summers. Winter rains (December through March) account for about 75 percent of the average annual rainfall; about 90 percent of the annual total rainfall is received in November to April period; and between June and September, normal rainfall is typically less than 0.10 inches. Annual precipitation amounts show greater differences in short distances. Annual totals exceed 40 inches in the mountains and are less than 15 inches in the sheltered valleys.

Pollution Potential

The Bay Area is subject to a combination of physiographic and climatic factors which result in a low potential for pollutant buildups near the coast and a high potential in sheltered inland valleys. In summer, areas with high average maximum temperatures tend to be sheltered inland valleys with abundant sunshine and light winds. Areas with low average maximum temperatures are exposed to the prevailing ocean breeze and experience frequent fog or stratus. Locations with warm summer days have a higher pollution potential than the cooler locations along the coast and bays.

In winter, pollution potential is related to the nighttime minimum temperature. Low minimum temperatures are associated with strong radiation inversions in inland valleys that are protected from the moderating influences of the ocean and bays. Conversely, coastal locations experience higher average nighttime temperatures, weaker inversions, stronger breezes and consequently less air pollution potential.

Air Quality

Criteria Pollutants

It is the responsibility of the BAAQMD to ensure that state and federal ambient air quality standards are achieved and maintained in its geographical jurisdiction. Health-based air quality standards have been established by California and the federal government for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), PM_{10}, $PM_{2.5}$, sulfur dioxide (SO_2) and lead. These standards were established to protect sensitive receptors with a margin of safety from adverse health impacts due to exposure to air pollution. The California standards are more stringent than the federal standards. California has also established standards for sulfate, visibility, hydrogen sulfide, and vinyl chloride.

The state and national ambient air quality standards for each of these pollutants and their effects on health are summarized in Table 3-1. The BAAQMD monitored levels of various criteria pollutants at 22 monitoring stations in 2011.

The 2011 air quality data from the BAAQMD monitoring stations are presented in Table 3-2. The data indicate that the air quality at all monitoring stations were below the state standard and federal ambient air quality standards for CO, NO_2, and SO_2. The federal 8-hour ozone standard was exceeded on 4 days in the District in 2011, while the state 8-hour standard was exceeded on 10 days. The State 1-hour ozone standard was exceeded on 5 days in 2011 in the District. The ozone standards are most frequently exceeded in the Eastern District (Bethel Island (4 days in excess of the State 1-hour ozone standard), Concord (5 days), Fairfield (3 days) and Livermore (9 days)), and the Santa Clara Valley (San Martin (2 days), Los Gatos (1 day) and Gilroy (1 day)) (see Table 3-2).

Air quality conditions in the San Francisco Bay Area have improved since the District was created in 1955. Ambient concentrations of air pollutants and the number of days on which the region exceeds air quality standards have fallen dramatically (see Table 3-3). The District is in attainment of the State and federal ambient air quality standards for CO, NO_2, and SO_2. The District is not considered to be in attainment with the ozone standards and State PM_{10} and $PM_{2.5}$ standards.

TABLE 3-1

Federal and State Ambient Air Quality Standards

	STATE STANDARD	FEDERAL PRIMARY STANDARD	MOST RELEVANT EFFECTS
AIR POLLUTANT	CONCENTRATION/ AVERAGING TIME	CONCENTRATION/ AVERAGING TIME	
Ozone	0.09 ppm, 1-hr. avg. > 0.070 ppm, 8-hr	0.075 ppm, 8-hr avg. >	(a) Short-term exposures: (1) Pulmonary function decrements and localized lung edema in humans and animals (2) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (b) Long-term exposures: Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (c) Vegetation damage; (d) Property damage
Carbon Monoxide	9.0 ppm, 8-hr avg. > 20 ppm, 1-hr avg. >	9 ppm, 8-hr avg.> 35 ppm, 1-hr avg.>	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses
Nitrogen Dioxide	0.03 ppm, annual avg.> 0.18 ppm, 1-hr avg. >	0.053 ppm, ann. avg.> 0.10 ppm, 1-hr avg.>	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration
Sulfur Dioxide	0.04 ppm, 24-hr avg.> 0.25 ppm, 1-hr. avg. >	0.5 ppm, 3-hr. avg.> 0.075 ppm, 1-hr avg.>	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma
Suspended Particulate Matter (PM_{10})	20 µg/m3, annual arithmetic mean > 50 µg/m3, 24-hr average>	150 µg/m3, 24-hr avg.>	(a) Excess deaths from short-term exposures and exacerbation of symptoms in sensitive patients with respiratory disease; (b) Excess seasonal declines in pulmonary function, especially in children
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m3, annual arithmetic mean>	15 µg/m3, annual arithmetic mean> 35 µg/m3, 24-hour average>	Decreased lung function from exposures and exacerbation of symptoms in sensitive patients with respiratory disease; elderly; children.
Sulfates	25 µg/m3, 24-hr avg. >=		(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage
Lead	1.5 µg/m3, 30-day avg. >=	1.5 µg/m3, calendar quarter> 0.15 µg/m3, 3-mo. avg. >	(a) Increased body burden; (b) Impairment of blood formation and nerve conduction
Visibility-Reducing Particles	In sufficient amount to give an extinction coefficient >0.23 inverse kilometers (visual range to less than 10 miles) with relative humidity less than 70%, 8-hour average (10am – 6pm PST)		Nephelometry and AISI Tape Sampler; instrumental measurement on days when relative humidity is less than 70 percent

TABLE 3-2

Bay Area Air Pollution Summary – 2011

MONITORING STATIONS	OZONE						CARBON MONOXIDE			NITROGEN DIOXIDE			SULFUR DIOXIDE			PM_{10}				$PM_{2.5}$				
	Max 1-hr	Cal 1-hr Days	Max 8-hr	Nat 8-Hr Days	Cal Days	3-Yr Avg	Max 1-hr	Max 8-hr	Nat/ Cal Days	Max 1-Hr	Ann Avg	Nat/ Cal Days	Max 1-hr	Max 24-hr	Nat/ Cal Days	Ann Avg	Max 24-hr	Nat Days	Cal Days	Max 24-hr	Nat Days	3-Yr Avg	Ann Avg	3-Yr Avg
North Counties	(ppb)						(ppm)			(ppb)			(ppb)			(μm^3)				(μm^3)				
Napa	83	0	69	0	0	65	2.4	1.8	0	45	8	0	--	--	--	20.2	55	0	1	--	--	--	--	--
San Rafael*	92	0	70	0	0	53	1.9	1.0	0	53	12	0	--	--	--	16.5	54	0	1	42.2	1	*	9.9	*
Santa Rosa	73	0	53	0	0	50	1.8	1.2	0	41	9	0	--	--	--	--	--	--	--	33.2	0	24	8.6	8.0
Vallejo	90	0	69	0	0	61	3.0	2.4	0	47	10	0	7.4	2.6	0	--	--	--	--	54.2	6	29	9.8	9.1
Coast/Central Bay																								
Oakland	91	0	51	0	0	49	4.1	1.5	0	56	13	0	--	--	--	--	--	--	--	49.3	3	25	10.1	9.0
Oakland West*	57	0	48	0	0	*	3.5	2.7	0	62	16	0	19.3	3.8	0	--	--	--	--	--	--	--	--	--
Richmond	--	--	--	--	--	--	--	--	--	--	--	--	20.7	3.2	0	--	--	--	--	--	--	--	--	--
San Francisco	70	0	54	0	0	47	1.8	1.2	0	93	14	0	--	--	--	19.5	46	0	0	47.5	2	27	9.5	9.9
San Pablo*	78	0	58	0	1	*	1.9	1.0	0	51	10	0	14.4	6.0	0	19.7	73	0	1	--	--	--	--	--
Eastern District																								
Bethel Island	91	0	78	2	4	74	1.4	0.9	0	36	7	0	8.0	2.7	0	18.8	72	0	1	--	--	--	--	--
Concord	57	2	78	2	5	73	1.6	1.2	0	42	9	0	9.3	2.6	0	15.7	59	0	1	47.5	2	27	7.8	7.8
Crockett	--	--	--	--	--	--	--	--	--	--	--	--	53.5	5.9	0	--	--	--	--	--	--	--	--	--
Fairfield	94	0	76	1	3	69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Livermore	115	3	84	2	9	76	--	--	--	57	11	0	--	--	--	--	--	--	--	45.4	2	28	7.8	8.2
Martinez	--	--	--	--	--	--	--	--	--	--	--	--	28.9	4.7	0	--	--	--	--	--	--	--	--	--
South Central Bay																								
Hayward*	88	0	70	0	0	*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Redwood City	76	0	61	0	0	56	3.8	1.7	0	56	12	0	--	--	--	--	--	--	--	39.7	1	25	8.7	8.6
Santa Clara Valley																								
Cupertino*	86	0	67	0	0	*	1.2	1.0	0	42	9	0	35.1	6.6	0	14.2	29	0	0	--	--	--	--	--
Gilroy	81	0	73	0	1	71	--	--	--	--	--	--	--	--	--	--	--	--	--	35.5	1	22	8.1	8.4
Los Gatos	91	0	75	0	1	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Jose Central	98	1	67	0	0	63	2.5	2.3	0	61	15	0	7.2	2.4	0	19.2	44	0	0	50.5	3	30	9.9	9.6
San Martin	91	0	72	0	2	70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Days over Standard		**5**		**4**	**10**				**0**			**0**			**0**			**0**	**4**		**8**			

* $PM_{2.5}$ monitoring began at San Rafael in October, 2009. 3-year average ozone statistics are not available. Ozone monitoring at Oakland-West began in December, 2010. 3-year average ozone statistics are not available. The San Pablo site was temporarily closed from March 2009 to May 2010 due to damage from a building fire. 3-year ozone statistics are not available. The Hayward site was temporarily closed in 2010 due to a major construction project adjacent to the site. 3-year average ozone statistics are not available. A new site was opened in Cupertino on September 1, 2010 for an air monitoring study. 3-year average ozone statistics are not available.

(ppb) = parts per billion (ppm) = parts per million, ($\mu g/m^3$) = micrograms per cubic meter.

TABLE 3-3

Bay Area Air Quality Summary
Days over Standards

YEAR	OZONE			CARBON MONOXIDE				NO_2	SULFUR DIOXIDE		PM_{10}		$PM_{2.5}$
	1-Hr	8-Hr	8-Hr*	1-Hr		8-Hr		1-Hr	24-Hr		24-Hr*		24-Hr**
	Cal	Cal	Nat	Nat	Cal	Nat	Cal	Cal	Nat	Cal	Nat	Cal	Nat
2001	15	--	7	0	0	0	0	0	0	0	0	10	5
2002	16	--	7	0	0	0	0	0	0	0	0	6	7
2003	19	--	7	0	0	0	0	0	0	0	0	6	0
2004	7	--	0	0	0	0	0	0	0	0	0	7	1
2005	9	9	1	0	0	0	0	0	0	0	0	6	0
2006	18	22	12	0	0	0	0	0	0	0	0	15	10
2007	4	9	1	0	0	0	0	0	0	0	0	4	14
2008	9	20	12	0	0	0	0	0	0	0	0	5	12
2009	11	13	8	0	0	0	0	0	0	0	0	1	11
2010	8	11	9	0	0	0	0	0	0	0	0	2	6
2011	5	10	4	0	0	0	0	0	0	0	0	4	8

* Ozone exceedance days beginning in 2008 reflect new U.S.EPA standard of 0.075 ppm.
** $PM_{2.5}$ exceedance days beginning in 2006 reflect new U.S.EPA standard of 35 $\mu g/m^3$.

Toxic Air Pollutants

The BAAQMD maintains a database that contains information concerning emissions of TACs from permitted stationary sources in the Bay Area. This inventory, and a similar inventory for mobile and area sources compiled by CARB, is used to plan strategies to reduce public exposure to TACs. The detailed concentrations of various TACs are reported in the BAAQMD, Toxic Air Contaminant Control Program, 2003 Annual Report (BAAQMD, 2007) and summarized in Table 3-4. The 2003 TAC data show decreasing concentrations of many TACs in the Bay Area. The most dramatic emission reductions in recent years have been for certain chlorinated compounds that are used as solvents including 1,1,1-trichloroethane, methylene chloride, and perchloroethylene. Table 3-4 contains a summary of ambient air toxics listed by compound.

TABLE 3-4

Summary of BAAQMD Ambient Air Toxics Monitoring Data[1]

Pollutant	Units	Average MDL [1]	% less than MDL	Max Sample Value	Min Sample Value	Average Sample Value [2] [3]
1,3-Butadiene	ppb	5.00E-02	87%	2.60E-01	0.00E+00	3.51E-02
Acetaldehyde	ppb	1.00E-01	1%	2.66E+00	1.00E-01	6.47E-01
Acetone	ppb	3.00E-01	0%	4.30E+01	4.00E-01	2.53E+00
Acetonitrile	ppb	3.00E-01	29%	1.25E+00	0.00E+00	3.88E-01
Antimony	ng/m^3	3.00E+00	98%	3.10E+00	1.50E+00	1.53E+00
Arsenic	ng/m^3	1.50E+00	98%	9.30E+00	7.50E-01	8.70E-01
Benzene	ppb	5.00E-02	1%	1.11E+00	0.00E+00	2.04E-01
Bromomethane	ppb	3.00E-02	92%	7.00E-02	1.50E-02	1.79E-02
Cadmium	ng/m^3	1.50E+00	96%	2.80E+00	7.50E-01	8.14E-01
Carbon Tetrachloride	ppb	1.00E-02	0%	1.50E-01	1.00E-02	9.81E-02
Chlorine	$\mu g/m^3$	7.18E-03	12%	1.87E+00	0.00E+00	2.54E-01
Chloroform	ppb	2.00E-02	66%	5.90E-01	0.00E+00	1.71E-02
Chromium	ng/m^3	3.00E+00	54%	8.50E+01	1.50E+00	4.76E+00
Cis-1,3-Dichloropropylene	ppb	1.00E-01	100%	5.00E-02	5.00E-02	5.00E-02
Cobalt	ng/m^3	1.50E+00	98%	4.10E+00	7.50E-01	7.90E-01
Copper	ng/m^3	1.50E+00	0%	4.00E+01	3.00E+00	1.38E+01
Dichloromethane	ppb	1.00E-01	48%	8.67E+00	0.00E+00	1.65E-01
Ethyl Alcohol	ppb	6.60E-01	4%	9.00E+01	0.00E+00	2.48E+01
Ethylbenzene	ppb	2.00E-01	48%	1.01E+00	0.00E+00	9.66E-02
Ethylene Dibromide	ppb	1.00E-02	100%	0.00E+00	0.00E+00	5.00E-03
Ethylene Dichloride	ppb	1.00E-01	100%	0.00E+00	0.00E+00	5.00E-02
Formaldehyde	ppb	1.00E-01	0%	4.60E+00	2.72E-01	1.07E+00
Lead	ng/m^3	1.50E+00	4%	2.50E+01	7.50E-01	5.94E+00
M/P Xylene	ppb	2.00E-01	11%	3.31E+00	0.00E+00	3.55E-01
Magnesium	$\mu g/m^3$	1.33E-02	47%	2.02E-01	0.00E+00	3.30E-02
Manganese	ng/m^3	1.50E+00	8%	1.70E+02	7.50E-01	1.71E+01
Mercury	$\mu g/m^3$	6.08E-03	98%	1.04E-02	0.00E+00	3.12E-03
Methyl Chloroform	ppb	2.00E-02	89%	1.16E+00	0.00E+00	2.60E-02
Methyl Ethyl Ketone	ppb	1.00E-01	31%	1.71E+00	0.00E+00	1.81E-01
Naphthalene	ng/m^3	6.35E-01	0%	2.09E+02	1.74E+01	6.97E+01
Nickel	ng/m^3	9.00E+00	67%	1.00E+02	4.50E+00	1.05E+01
O-Xylene	ppb	1.00E-01	29%	1.14E+00	0.00E+00	1.27E-01

TABLE 3-4 (Concluded)

Pollutant	Units	Average MDL [1]	% less than MDL	Max Sample Value	Min Sample Value	Average Sample Value [2] [3]
PAHs[4]	ng/m^3					1.79E-01
Selenium	ng/m^3	1.50E+00	84%	5.40E+01	7.50E-01	1.74E+00
Styrene	ppb	1.00E-01	98%	8.40E-01	5.00E-02	6.01E-02
Tetrachloroethylene	ppb	1.00E-02	29%	2.00E+00	0.00E+00	2.26E-02
Toluene	ppb	2.00E-01	2%	3.38E+00	4.00E-02	6.54E-01
Trans-1,3-Dichloropropylene	ppb	1.00E-01	100%	5.00E-02	5.00E-02	5.00E-02
Trichloroethylene	ppb	2.00E-02	87%	7.70E-01	0.00E+00	1.40E-02
Trichlorofluoromethane	ppb	1.00E-02	0%	7.40E-01	1.60E-01	2.58E-01
Vanadium	ng/m^3	1.50E+00	34%	6.10E+01	7.50E-01	3.79E+00
Vinyl Chloride	ppb	1.00E-01	100%	0.00E+00	0.00E+00	5.00E-02
Zinc	ng/m^3	3.00E+00	0%	5.90E+01	8.00E+00	2.45E+01

(1) Source: BAAQMD 2008 Toxic Air Contaminant Monitoring Data. Data are a summary of data from all monitoring stations within the District.
(2) Some samples (especially metals) have individual MDLs for each sample. An average of these MDLs was used to determine 1/2 MDL for the Average Sample Value.
(3) If an individual sample value was less than the MDL (Method Detection Limit), then 1/2 MDL was used to determine the Average Sample Value.
(4) These substances are PAH-derivatives that have OEHHA-developed Potency Equivalency Factors (PEFs). PAHs should be evaluated as benzo(a)pyrene equivalents. This evaluation process consists of multiplying individual PAH-specific emission levels with their corresponding PEFs listed below. The sum of these products is the benzo(a)pyrene-equivalent level.

Regulatory Background

Criteria Pollutants

At the federal level, the Clean Air Act (CAA) Amendments of 1990 give the U.S. EPA additional authority to require states to reduce emissions of ozone precursors and particulate matter in non-attainment areas. The amendments set attainment deadlines based on the severity of problems. At the state level, CARB has traditionally established state ambient air quality standards, maintained oversight authority in air quality planning, developed programs for reducing emissions from motor vehicles, developed air emission inventories, collected air quality and meteorological data, and approved state implementation plans. At a local level, California's air districts, including the BAAQMD, are responsible for overseeing stationary source emissions, approving permits, maintaining emission inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

The BAAQMD is governed by a 22-member Board of Directors composed of publicly-elected officials apportioned according to the population of the represented counties. The Board has the authority to develop and enforce regulations for the control of air pollution within its jurisdiction. The BAAQMD is responsible for implementing emissions standards

and other requirements of federal and state laws. It is also responsible for developing air quality planning documents required by both federal and state laws.

Toxic Air Contaminants

TACs are regulated in the District through federal, state, and local programs. At the federal level, TACs are regulated primarily under the authority of the CAA. Prior to the amendment of the CAA in 1990, source-specific NESHAPs were promulgated under Section 112 of the CAA for certain sources of radionuclides and Hazardous Air Pollutants (HAPs).

Title III of the 1990 CAA amendments requires U.S. EPA to promulgate NESHAPs on a specified schedule for certain categories of sources identified by U.S. EPA as emitting one or more of the 189 listed HAPs. Emission standards for major sources must require the maximum achievable control technology (MACT). MACT is defined as the maximum degree of emission reduction achievable considering cost and non-air quality health and environmental impacts and energy requirements. All NESHAPs were to be promulgated by the year 2000. Specific incremental progress in establishing standards were to be made by the years 1992 (at least 40 source categories), 1994 (25 percent of the listed categories), 1997 (50 percent of remaining listed categories), and 2000 (remaining balance). The 1992 requirement was met; however, many of the four-year standards were not promulgated as scheduled. Promulgation of those standards has been rescheduled based on court ordered deadlines, or the aim to satisfy all Section 112 requirements in a timely manner.

Many of the sources of TACs that have been identified under the CAA are also subject to the California TAC regulatory programs. CARB developed three regulatory programs for the control of TACs. Each of the programs is discussed in the following subsections.

Control of TACs Under the TAC Identification and Control Program: California's TAC identification and control program, adopted in 1983 as Assembly Bill 1807 (AB 1807) (California Health and Safety Code §39662), is a two-step program in which substances are identified as TACs, and airborne toxic control measures (ATCMs) are adopted to control emissions from specific sources. Since adoption of the program, CARB has identified 18 TACs, and CARB adopted a regulation designating all 189 federal HAPs as TACs.

Control of TACs Under the Air Toxics "Hot Spots" Act: The Air Toxics Hot Spot Information and Assessment Act of 1987 (AB 2588) (California Health and Safety Code §39656) establishes a state-wide program to inventory and assess the risks from facilities that emit TACs and to notify the public about significant health risks associated with those emissions. Inventory reports must be updated every four years under current state law. The BAAQMD uses a maximum individual cancer risk of 10 in one million, or an ambient concentration above a non-cancer reference exposure level, as the threshold for notification.

Senate Bill (SB) 1731, enacted in 1992 (California Health and Safety Code §44390 et seq.), amended AB 2588 to include a requirement for facilities with significant risks to prepare and implement a risk reduction plan which will reduce the risk below a defined significant risk level within specified time limits. At a minimum, such facilities must, as quickly as

feasible, reduce cancer risk levels that exceed 100 per one million. The BAAQMD adopted risk reduction requirements for perchloroethylene dry cleaners to fulfill the requirements of SB 1731.

Targeted Control of TACs Under the Community Air Risk Evaluation Program: In 2004, BAAQMD established the Community Air Risk Evaluation (CARE) program to identify locations with high emissions of toxic air contaminants (TAC) and high exposures of sensitive populations to TAC and to use this information to help establish policies to guide mitigation strategies that obtain the greatest health benefit from TAC emission reductions. For example, BAAQMD uses information derived from the CARE program to develop and implement targeted risk reduction programs, including grant and incentive programs, community outreach efforts, collaboration with other governmental agencies, model ordinances, new regulations for stationary sources and indirect sources, and advocacy for additional legislation.

Discussion of Impacts

III a. The 2010 Clean Air Plan is the most recently adopted air quality plan for the Bay Area. SSM-1 in the Bay Area 2010 Clean Air Plan committed the BAAQMD investigate the potential rule to reduce organic compounds, fine particulates, toxic compounds and odor emissions from metal melting, recycling, and shredding operations. Regulation 12-13 and 6-4 are being proposed with the objective of implementing SSM 1 from the Bay Area 2010 Clean Air Plan. Because the proposed new rules would directly implement a stationary source measure in the 2010 Clean Air Plan, the proposed amendments are in compliance with the local air quality plan and are expected to provide beneficial impacts associated with reduced PM concentrations in the Bay Area.

III b. BAAQMD is currently proposing Draft Regulation 12, Rule 13: Foundry and Forging Operations, and Regulation 6, Rule 4: Metal Recycling and Shredding Operations. Both of these draft rules are expected to result in emission reductions through the development and implementation of Emissions Minimization Plans to minimize fugitive emissions. The reliance on the development of an EMP allows each facility to tailor its approach to reducing or minimizing fugitive emissions to the unique conditions and configuration of its affected operations.

The seven largest potentially affected facilities (foundries, forges, and recyclers) emit, collectively, about 741 pounds of particulate matter per day or 135.3 tons/year. Point source emissions of PM at various metal melting and processing facilities are subject to stringent controls. Source test results show that PM control levels range from 0.0005 to 0.078 grains per dry standard cubic feet. This level of control of point sources is due to permit conditions based on current District, State, and federal regulations. However, fugitive emissions of PM and odorous substances are not always adequately addressed and there are additional opportunities to further reduce fugitive emissions from these industrial sectors. Additionally, PM emissions from foundries, forges, and metal recycling operations may contain toxic metals, which would also be reduced by targeting these emissions.

The requirements of the EMP are aimed at minimizing PM and odorous emissions. The proposed rules would allow each facility to identify practices for reducing fugitive emissions according to the needs and capabilities of their operations. Accordingly, an estimation of emission reductions due to the adoption of the proposed rules is difficult to estimate at this time. Nonetheless, additional control of fugitive emissions is expected to result in an overall reduction in PM emissions.

PM is a mixture of suspended particles and liquid droplets and includes elements such as carbon and metals, compounds such as nitrates, organics and sulfates and complex mixtures such as diesel exhaust and wood smoke. PM is a leading health concern. A large body of evidence suggests that exposure to PM, particularly fine PM, can cause a wide range of health effects, including aggravation of asthma and bronchitis, an increase in visits to the hospital with respiratory and cardio-vascular symptoms, and a contribution to heart attacks and deaths. The Bay Area is not in attainment of the California standards for either PM of 10 microns or less aerodynamic diameter (PM10) or PM of 2.5 microns or less aerodynamic diameter (PM2.5). In addition, most of the facilities proposed to be regulated are located in or near BAAQMD Community Air Risk Evaluation (CARE) communities. Reducing PM2.5 emissions, which also contains toxic metals, in these communities will help improved health and air quality in these communities.

III c. CEQA Guidelines indicate that cumulative impacts of a project shall be discussed when the project's incremental effect is cumulatively considerable, as defined in CEQA Guidelines §15065(c). The overall impact of the proposed Regulations 12-13 and 6-4 is a decrease in fugitive PM and odorous emissions. Therefore, the cumulative air quality impacts of the proposed new rules are expected to be beneficial, resulting in a decrease in PM and odorous emissions.

III d. Metal working facilities are expected to comply with the proposed Regulations 12-13 and 6-4 with minor facility upgrades, modifications, as well as, practices and procedures designed to minimize fugitive emissions of PM and odorous substances. Fugitive PM from metal working facilities are often sources of TACs. The expected modifications, upgrades and procedural changes from affected facilities are expected to decrease PM emissions, which would include reduction in TAC emissions. Therefore, the proposed new rules are expected to result in a decrease in TAC emissions to sensitive receptors. Therefore, no significant TAC impacts are expected as a result of Regulations 12-13 and 6-4.

III e. The proposed new rules are being developed to minimize PM and odorous substance emissions from foundry and forging and metal recycling and shredding operations. Odors associated with foundries are key components of the proposed new Regulations 12-13. Affected facilities that use mold and core binders made with odorous substances, such as phenol, would be required to investigate the availability and efficacy of alternative binders that produce fewer emissions of odorous substances. The facility would have to complete and report the results of this investigation to the District no later than two years after the adoption of the rule and again at two year anniversary of the receipt of the initial report. The facilities are tasked to periodically research alternatives to binders formulated with phenols or other odorous substances. Although, currently, not all casting jobs can be performed using low phenolic binder, manufacturers are constantly developing and testing new

formulations that may allow foundries to replace binders formulated with phenol. Such replacements could greatly reduce, if not eliminate, the emissions of phenolic compounds which contribute to odorous emissions. Therefore, implementation of the proposed rules is expected to result in beneficial impacts on odors.

Based upon these considerations, no significant adverse air quality impacts are expected from the implementation of the proposed new rules. In fact, the proposed new rules are expected to provide beneficial air quality impacts by reducing PM and odorous emissions and improve health benefits associated with reduce exposure to these compounds.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IV.	**BIOLOGICAL RESOURCES.** Would the project:				
a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☑
c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☑
d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☑
e)	Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☑
f)	Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. A wide variety of biological resources are located within the Bay Area.

The areas affected by the proposed new rules are located in the Bay Area-Delta Bioregion (as defined by the State's Natural Communities Conservation Program). This Bioregion is comprised of a variety of natural communities, which range from salt marshes to chaparral to oak woodland. The areas affected by the proposed new rules are located within the boundaries of existing metal melting, recycling and shredding facilities within the Bay Area. The affected areas have been graded to develop various industrial operations. Native vegetation, other than landscape vegetation, has generally been removed from industrial areas to minimize safety and fire hazards. Any new development would fall under compliance with the City or County General Plans.

Regulatory Background

Biological resources are generally protected by the City and/or County General Plans through land use and zoning requirements which minimize or prohibit development in biologically sensitive areas. Biological resources are also protected by the California Department of Fish and Game, and the U.S. Fish and Wildlife Service. The U.S Fish and Wildlife Service and National Marine Fisheries Service oversee the federal Endangered Species Act. Development permits may be required from one or both of these agencies if development would impact rare or endangered species. The California Department of Fish and Game administers the California Endangered Species Act which prohibits impacting endangered and threatened species. The U.S. Army Corps of Engineers and the U.S. EPA regulate the discharge of dredge or fill material into waters of the United States, including wetlands.

Discussion of Impacts

IV a – f. No impacts on biological resources are anticipated from the proposed new rules which would apply to existing metal working facilities. Existing foundries and forges and recycling and shredding facilities affected by the proposed Regulations 12-13 and 6-4 are located within existing industrial areas, which do not typically include sensitive biological species. These industrial areas have been graded and developed, and biological resources, with the exception of landscape species, have been removed. Any construction activities associated with the proposed Regulations 12-13 and 6-4 are expected to be limited to within the boundaries of existing metal working facilities and no development outside of existing facilities is expected.

Based upon these considerations, no significant adverse impacts to biological resources are expected from the adoption of Regulations 12-13 and 6-4.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
V.	**CULTURAL RESOURCES.** Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	☐	☐	☐	☑
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☐	☐	☑
c)	Directly of indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☑
d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural and open space uses. Cultural resources are defined as buildings, sites, structures, or objects which might have historical architectural, archaeological, cultural, or scientific importance.

The Carquinez Strait represents the entry point for the Sacramento and San Joaquin Rivers into the San Francisco Bay. This locality lies within the San Francisco Bay and the west end of the Central Valley archaeological regions, both of which contain a rich array of prehistoric and historical cultural resources. The areas surrounding the Carquinez Strait and Suisun Bay have been occupied for millennia given their abundant combination of littoral and oak woodland resources.

The metal melting and processing and metal recycling and shredding facilities affected by the proposed new rules are primarily located within industrialized areas in the Bay Area. These facilities have already been graded to develop metal melting and processing, as well as, metal recycling and shredding facilities and are typically surrounded by other industrial uses. Cultural resources are generally not located within these areas.

Regulatory Background

The State CEQA Guidelines define a significant cultural resource as a "resource listed or eligible for listing on the California Register of Historical Resources" (Public Resources Code Section 5024.1). A project would have a significant impact if it would cause a substantial adverse change in the significance of a historical resource (State CEQA Guidelines Section 15064.5(b)). A substantial adverse change in the significance of a historical resource would result from an action that would demolish or adversely alter the physical characteristics of the historical resource that convey its historical significance and that qualify the resource for inclusion in the California Register of Historical Resources or a local register or survey that meets the requirements of Public Resources Code Sections 50020.1(k) and 5024.1(g).

Discussion of Impacts

V a – d. No impacts on cultural resources are anticipated from the proposed new rules that would apply to foundries and forges and metal recycling and shredding facilities. The facilities affected by the proposed new rules already exist and are located within the confines of existing developed, industrial facilities. Any modifications to existing equipment and any new equipment is expected to be installed or modified within the boundaries of existing facilities. The existing areas have been graded and developed. No new construction would be required outside of the existing facility boundaries due to the adoption of the new rules. Therefore, no significant adverse impacts to cultural resources are expected due to Regulations 12-13 and 6-4.

Based upon these considerations, no significant adverse impacts to cultural resources are expected from the implementation of the proposed Regulations 12-13 and 6-4.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI.	**GEOLOGY AND SOILS.**				
	Would the project:				
a)	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i)	Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a know fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☑
ii)	Strong seismic ground shaking?	☐	☐	☑	☐
iii)	Seismic-related ground failure, including liquefaction?	☐	☐	☑	☐
iv)	Landslides?	☐	☐	☐	☑
b)	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☑
c)	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☑
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☑
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. The facilities affected by the proposed new rules are located primarily in industrial areas within the Bay Area.

The affected foundries and forges and recycling and shredding facilities are located in the natural region of California known as the Coast Ranges geomorphic province. The province is characterized by a series of northwest trending ridges and valleys controlled by tectonic folding and faulting, examples of which include the Suisun Bay, East Bay Hills, Briones Hills, Vaca Mountains, Napa Valley, and Diablo Ranges.

Regional basement rocks consist of the highly deformed Great Valley Sequence, which include massive beds of sandstone inter-fingered with siltstone and shale. Unconsolidated alluvial deposits, artificial fill, and estuarine deposits, (including Bay Mud) underlie the low-lying region along the margins of the Carquinez Straight and Suisun Bay. The estuarine sediments found along the shorelines of Solano County are soft, water-saturated mud, peat and loose sands. The organic, soft, clay-rich sediments along the San Francisco and San Pablo Bays are referred to locally as Bay Mud and can present a variety of engineering challenges due to inherent low strength, compressibility and saturated conditions. Landslides in the region occur in weak, easily weathered bedrock on relatively steep slopes.

The San Francisco Bay Area is a seismically active region, which is situated on a plate boundary marked by the San Andreas Fault System. Several northwest trending active and potentially active faults are included with this fault system. Under the Alquist-Priolo Earthquake Fault Zoning Act, Earthquake Fault Zones were established by the California Division of Mines and Geology along “active” faults, or faults along which surface rupture occurred in Holocene time (the last 11,000 years). In the Bay area, these faults include the San Andreas, Hayward, Rodgers Creek-Healdsburg, Concord-Green Valley, Greenville-Marsh Creek, Seal Cove/San Gregorio and West Napa faults. Other smaller faults in the region classified as potentially active include the Southampton and Franklin faults.

Ground movement intensity during an earthquake can vary depending on the overall magnitude, distance to the fault, focus of earthquake energy, and type of geological material. Areas that are underlain by bedrock tend to experience less ground shaking than those underlain by unconsolidated sediments such as artificial fill. Earthquake ground shaking may have secondary effects on certain foundation materials, including liquefaction, seismically induced settlement, and lateral spreading.

Regulatory Background

Construction is regulated by the local City or County building codes that provide requirements for construction, grading, excavations, use of fill, and foundation work including type of materials, design, procedures, etc. which are intended to limit the

probability of occurrence and the severity of consequences from geological hazards. Necessary permits, plan checks, and inspections are generally required.

The City or County General Plan includes the Seismic Safety Element. The Element serves primarily to identify seismic hazards and their location in order that they may be taken into account in the planning of future development. The California Building Code is the principle mechanism for protection against and relief from the danger of earthquakes and related events.

In addition, the Seismic Hazard Zone Mapping Act (Public Resources Code §§2690 – 2699.6) was passed by the California legislature in 1990 following the Loma Prieta earthquake. The Act required that the California Division of Mines and Geology (DMG) develop maps that identify the areas of the state that require site specific investigation for earthquake-triggered landslides and/or potential liquefaction prior to permitting most urban developments. The act directs cities, counties, and state agencies to use the maps in their land use planning and permitting processes.

Local governments are responsible for implementing the requirements of the Seismic Hazards Mapping Act. The maps and guidelines are tools for local governments to use in establishing their land use management policies and in developing ordinances and review procedures that will reduce losses from ground failure during future earthquakes.

Discussion of Impacts

VI a. The metal working facilities affected by the proposed new rules already exist and are located within the confines of existing industrial areas in the Bay Area. Any new construction activities associated with the implementation of Regulations 12-13 and 6-4 are expected to be minor modifications to existing structures, occur completely within the confines of the existing industrial facilities, and would consist more of modifications and upgrades to existing equipment than new construction. Any new structural construction must be designed to comply with the California Building Code requirements. The local cities and counties are responsible for assuring that new construction complies with the California Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The California Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage, but with some non-structural damage; and (3) resist major earthquakes without collapse, but with some structural and non-structural damage. The California Building Code bases seismic design on minimum lateral seismic forces ("ground shaking"). The California Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the California Building Code seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site.

Any new development within the confines of existing industrial facilities would be required to obtain building permits, as applicable, for new structures at any site. The issuance of building permits from the local agency will assure compliance with the California Building Code requirements which include requirements for building within seismic hazard zones. No significant impacts from seismic hazards are expected since any new development would be required to comply with building codes.

VII b. No new significant construction activities would be required due to the adoption of Regulations 12-13 and 6-4. Metal working facilities and the associated equipment affected by the proposed new rules already exist and are located within the confines of existing industrial facilities. Any new equipment, or any upgrades to existing equipment, would be installed within the confines of the existing boundaries in similar locations. Therefore, the proposed amendments are not expected to require substantial grading or construction that would result in substantial soil erosion or the loss of topsoil.

VII c – e. The metal working facilities affected by the proposed new rules already exist and are located within the confines of existing industrial facilities and no major construction activities are expected. New structures are expected to be limited to new control equipment, enclosures, improved roadways, or fencing. Since the metal working facilities already exist, no major construction activities are expected to occur on a geologic unit or soil that is unstable or that would become unstable, or potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse. Likewise, no structure would be constructed on expansive soil, as defined in Table 18-1-B of the California Building Code (1994), creating substantial risks to life or property. Compliance with the California Building Code would minimize the impacts associated with existing geological hazards. Construction would not affect soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater, as the proposed new rules have no impact on wastewater treatment/disposal systems. Therefore, no adverse significant impacts to geology and soils are expected due to the proposed Regulations 12-13 and 6-4.

Based upon these considerations, no significant geology and soils impacts are expected from the implementation of the proposed new rules.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GREENHOUSE GAS EMISSIONS.					
Would the project:					
a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☑	☐
b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☑

Setting

Global climate change refers to changes in average climatic conditions on the earth as a whole, including temperature, wind patterns, precipitation and storms. Global warming, a related concept, is the observed increase in the average temperature of the earth's surface and atmosphere. One identified cause of global warming is an increase of greenhouse gases (GHGs) in the atmosphere. The six major GHGs identified by the Kyoto Protocol are (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), haloalkanes (HFCs), and perfluorocarbons (PFCs). The GHGs absorb longwave radiant energy reflected by the earth, which warms the atmosphere. GHGs also radiate longwave radiation both upward to space and back down toward the surface of the earth. The downward part of this longwave radiation absorbed by the atmosphere is known as the "greenhouse effect." Some studies indicate that the potential effects of global climate change may include rising surface temperatures, loss in snow pack, sea level rise, more extreme heat days per year, and more drought years.

Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have heavily contributed to the increase in atmospheric levels of GHGs. Approximately 80 percent of GHG emissions in California are from fossil fuel combustion and over 70 percent of GHG emissions are carbon dioxide emissions (CARB, 2007 and CARB, 2009). The emission inventory in Table 3-5 focuses on GHG emissions due to human activities only, and compiles estimated emissions from industrial, commercial, transportation, domestic, forestry, and agriculture activities in the San Francisco Bay Area region of California. The GHG emission inventory in Table 3-5 reports direct emissions generated from sources within the Bay Area and estimates future GHG emissions.

TABLE 3-5

Bay Area Greenhouse Gas Emission Inventory Projections

(million metric tons CO_2-Equivalent)

SOURCE CATEGORY	Year	2005	2009	2012	2015	2020
INDUSTRIAL/COMMERCIAL						
Oil Refineries						
Refining Processes		3.4	3.5	3.6	3.7	3.9
Refinery Make Gas Combustion		4.7	4.9	5.0	5.2	5.4
Natural Gas and Other Gases Combustion		4.8	5.0	5.1	5.3	5.5
Liquid Fuel Combustion		0.1	0.1	0.1	0.1	0.1
Solid Fuel Combustion		1.0	1.0	1.1	1.1	1.1
Waste Management						
Landfill Combustion Sources		0.0	0.0	0.0	0.0	0.0
Landfill Fugitive Sources		1.2	1.2	1.2	1.2	1.2
Composting/POTWs		0.4	0.4	0.4	0.4	0.4
Other Industrial/ Commercial						
Cement Plants		0.9	0.9	0.9	0.9	1.0
Commercial Cooking		0.1	0.1	0.1	0.1	0.2
ODS Substitutes/Nat. Gas Distrib./Other		3.6	5.2	6.3	7.5	9.4
Reciprocating Engines		0.6	0.6	0.6	0.7	0.7
Turbines		0.4	0.4	0.4	0.4	0.4
Natural Gas- Major Combustion Sources		1.6	2.5	2.6	2.7	2.8
Natural Gas- Minor Combustion Sources		8.8	9.2	9.5	9.9	10.4
Coke Coal		1.0	1.0	1.1	1.1	1.2
Other Fuels Combustion		0.3	0.4	0.4	0.4	0.4
Subtotal		32.8	36.3	38.4	40.6	44.2
RESIDENTIAL FUEL USAGE						
Natural Gas		6.4	6.6	6.8	6.9	7.2
LPgas/Liquid Fuel		0.2	0.2	0.2	0.2	0.2
Solid Fuel		0.1	0.2	0.2	0.2	0.2
Subtotal		6.7	6.9	7.1	7.2	7.5
ELECTRICITY/ CO-GENERATION						
Co-Generation		5.5	5.5	5.7	6.0	6.4
Electricity Generation		2.8	3.1	3.2	3.3	3.5
Electricity Imports		6.8	7.3	7.6	7.9	8.3
Subtotal		15.1	15.8	16.5	17.2	18.3
OFF-ROAD EQUIPMENT						
Lawn and Garden Equipment		0.1	0.1	0.1	0.1	0.1
Construction Equipment		1.7	1.9	1.9	2.0	2.2
Industrial Equipment		0.7	0.8	0.8	0.9	1.0
Light Commercial Equipment		0.2	0.2	0.3	0.3	0.3
Subtotal		2.8	3.0	3.2	3.3	3.6
TRANSPORTATION						
Off-Road						
Locomotives		0.1	0.1	0.1	0.1	0.1
Ships		0.7	0.8	0.8	0.9	1.0
Boats		0.6	0.6	0.5	0.5	0.6

TABLE 3-5 (concluded)

SOURCE CATEGORY Year	2005	2009	2012	2015	2020
Commercial Aircraft	1.8	2.0	2.1	2.3	2.6
General Aviation	0.2	0.2	0.2	0.3	0.3
Military Aircraft	0.5	0.5	0.5	0.5	0.5
On-Road					
Passenger Cars/Trucks up to 10,000 lbs	26.6	27.1	27.9	29.0	30.9
Medium/Heavy Duty Trucks > 10,000 lbs	3.3	3.3	3.4	3.5	3.7
Urban, School and Other Buses	0.8	0.8	0.8	0.8	0.9
Motor-Homes and Motorcycles	0.2	0.2	0.2	0.2	0.2
Subtotal	34.8	35.6	36.7	38.1	40.7
AGRICULTURE/FARMING					
Agricultural Equipment	0.2	0.2	0.2	0.2	0.2
Animal Waste	0.6	0.6	0.6	0.6	0.6
Soil Management	0.3	0.3	0.3	0.3	0.3
Biomass Burning	0.0	0.0	0.0	0.0	0.0
Subtotal	1.1	1.1	1.1	1.1	1.1
GRAND TOTAL EMISSIONS	**93.4**	**98.7**	**103.0**	**107.5**	**115.4**

Source: BAAQMD, 2009

Regulatory Background

In response to growing scientific and political concern regarding global climate change, California has recently adopted a series of laws over the last decade to reduce both the level of GHGs in the atmosphere and to reduce emissions of GHGs from commercial and private activities within the state.

In September 2006, Governor Schwarzenegger signed California's Global Warming Solutions Act of 2006 (AB32). AB32 required CARB to:

- Establish a statewide GHG emissions cap for 2020, based on 1990 emissions, by January 1, 2008;
- Adopt mandatory reporting rules for significant sources of GHG emissions by January 1, 2008;
- Adopt an emissions reduction plan by January 1, 2009, indicating how emissions reductions will be achieved via regulations, market mechanisms, and other actions; and,
- Adopt regulations to achieve the maximum technologically feasible and cost-effect reductions of GHGs by January 1, 2011

In October 2011, CARB approved the cap-and-trade regulation, marking a significant milestone toward reducing California's greenhouse gas emissions under its AB 32 law. The regulation sets a statewide limit on the emissions from sources responsible for 80 percent of

California's greenhouse gas emissions. The regulation will cover 360 businesses representing 600 facilities and is divided into two broad phases: an initial phase beginning in 2012 that will include all major industrial sources along with utilities; and, a second phase that starts in 2015 and brings in distributors of transportation fuels, natural gas and other fuels.

Companies are not given a specific limit on their greenhouse gas emissions but must supply a sufficient number of allowances (each covering the equivalent of one ton of carbon dioxide) to cover their annual emissions. Each year, the total number of allowances issued in the state drops, requiring companies to find the most cost-effective and efficient approaches to reducing their emissions. By the end of the program in 2020 there will be a 15 percent reduction in greenhouse gas emissions compared to today, reaching the same level of emissions as the state experienced in 1990, as required under AB 32.

There has also been activity at the federal level on the regulation of GHGs. On October 30, 2009, the U.S. EPA issued the Final Mandatory Report of Greenhouse Gases Rule. The rule requires reporting of GHG emissions from large sources and suppliers (facilities that emit 25,000 metric tons of GHGs per year or more) in the United States, and is intended to collect accurate and timely emissions data to inform policy decision.

Discussion of Impacts

VII a and b. Combustion of conventional hydrocarbon fuel results in the release of energy as bonds between carbon and hydrogen are broken and reformed with oxygen to create water vapor and CO_2. CO_2 is not a pollutant that occurs in relatively low concentrations as a by-product of the combustion process; CO_2 is a necessary combustion product of any fuel containing carbon. Therefore, attempts to reduce emissions of greenhouse gases from combustion focus on increasing energy efficiency – consuming less fuel to provide the same useful energy output.

The analysis of GHG emissions is a different analysis than for criteria pollutants for the following reasons. For criteria pollutant, significance thresholds are based on daily emissions because attainment or non-attainment is typically based on daily exceedances of applicable ambient air quality standards. Further, several ambient air quality standards are based on relatively short-term exposure effects to human health, e.g., one-hour and eight-hour. Using the half-life of carbon dioxide (CO_2), 100 years, for example, the effects of GHGs are longer-term, affecting the global climate over a relatively long time frame. GHGs do not have human health effects like criteria pollutants. Rather, it is the increased accumulation of GHGs in the atmosphere that may result in global climate change. Due to the complexity of conditions and interactions affecting global climate change, it is not possible to predict the specific impact, if any, attributable to GHG emissions associated with a single project. Furthermore, the GHG emissions associated with the proposed rules would be small relative to total global or even state-wide GHG emissions. Thus, the significance of potential impacts from GHG emissions related to the proposed rules has been analyzed for long-term operations on a cumulative basis, as discussed below.

Cumulative GHG impacts in the Bay Area are generally evaluated in terms of the air quality management plan that controls overall air emissions within the District. Therefore, the cumulative GHG impacts include the proposed Rules 12-13 and 6-4 along with implementing the control measures in the 2010 Clean Air Plan, the most recent air quality plan approved in the District.

The proposed rules could result in additional air pollution control equipment. These devices may have some minor energy penalty associated with their operation, such as back-pressure on the production process on which a baghouse is installed, but this would be relatively minor compared to the scope of the underlying production process. Most of the facilities that would be regulated by Rules 12-13 and 6-4 already have existing air pollution control equipment. Measures to control fugitive emissions usually do not require additional control equipment but would include measures such as water mists and enclosures to minimize fugitive dust. Therefore, the proposed rules are not expected to result in a substantial increase in electricity or generate substantial GHG emissions. The potential increase in electricity could result in an increase in GHG emissions, which must be evaluated with other cumulative GHG emissions associated with the 2010 CAP. In addition, construction activities could require construction equipment which could also generate GHG emissions.

The proposed rules are not expected to result in a significant increase in GHG emissions, although there could be minor increases associated with additional electricity as discussed above. However, the proposed amendments, along with the 2010 CAP as a whole, are expected to promote a net decrease in GHG emissions. The 2010 CAP control measure strategy promotes fuel efficiency and pollution prevention, which also reduces greenhouse gas emissions. Measures that reduce fuel use and/or increase use of alternative fuels will also be beneficial. In general, strategies that conserve energy and promote clean technologies usually also reduce greenhouse gas emissions. As shown in Table 3-5, the fuel combustion and the generation of electricity are responsible for a large portion of greenhouse gases produced in California.

Based on the above discussion, implementation of the proposed new rules is not expected to result in a significant increase in GHG emissions. Based on the above, no significant adverse GHG impacts are expected due to implementation Regulations 12-13 and 6-4.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:					
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☑
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☑
c)	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☑
d)	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☑
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
f)	For a project within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☑

Setting

The affected foundries and forges and recycling and shredding facilities can handle hazardous materials. Accidents involving these substances can result in worker or public exposure to fire, heat, blast from an explosion, or airborne exposure to hazardous substances.

The potential hazards associated with handling such materials are a function of the materials being processed, processing systems, and procedures used to operate and maintain the facilities where they exist. The hazards that are likely to exist are identified by the physical and chemical properties of the materials being handled and their process conditions, including the following events.

- **Toxic gas clouds:** Toxic gas clouds are releases of volatile chemicals (e.g., anhydrous ammonia, chlorine, and hydrogen sulfide) that could form a cloud and migrate off-site, thus exposing individuals. "Worst-case" conditions tend to arise when very low wind speeds coincide with an accidental release, which can allow the chemicals to accumulate rather than disperse.

- **Torch fires (gas and liquefied gas releases), flash fires (liquefied gas releases), pool fires, and vapor cloud explosions (gas and liquefied gas releases):** The rupture of a storage tank or vessel containing a flammable gaseous material (like propane), without immediate ignition, can result in a vapor cloud explosion. The "worst-case" upset would be a release that produces a large aerosol cloud with flammable properties. If the flammable cloud does not ignite after dispersion, the cloud would simply dissipate. If the flammable cloud were to ignite during the release, a flash fire or vapor cloud explosion could occur. If the flammable cloud were to ignite immediately upon release, a torch fire would ensue.

- **Thermal Radiation:** Thermal radiation is the heat generated by a fire and the potential impacts associated with exposure. Exposure to thermal radiation would result in burns, the severity of which would depend on the intensity of the fire, the duration of exposure, and the distance of an individual to the fire.

- **Explosion/Overpressure:** Process vessels containing flammable explosive vapors and potential ignition sources are present at many types of industrial facilities. Explosions may occur if the flammable/explosive vapors came into contact with an ignition source. An explosion could cause impacts to individuals and structures in the area due to overpressure.

For all affected facilities, risks to the public are reduced if there is a buffer zone between industrial processes and residences or other sensitive land uses, or the prevailing wind blows away from residential areas and other sensitive land uses. The risks posed by operations at each facility are unique and determined by a variety of factors. The areas affected by the proposed new rules are typically located in industrial areas.

Regulatory Background

There are many federal and state rules and regulations that facilities handling hazardous materials must comply with which serve to minimize the potential impacts associated with hazards at these facilities.

Under the Occupational Safety and Health Administration (OSHA) regulations [29 Code of Federal Regulations (CFR) Part 1910], facilities which use, store, manufacture, handle, process, or move highly hazardous materials must prepare a fire prevention plan. In addition, 29 CFR Part 1910.119, Process Safety Management (PSM) of Highly Hazardous Chemicals, and Title 8 of the California Code of Regulations, General Industry Safety Order §5189, specify required prevention program elements to protect workers at facilities that handle toxic, flammable, reactive, or explosive materials.

Section 112 (r) of the Clean Air Act Amendments of 1990 [42 U.S.C. 7401 et. Seq.] and Article 2, Chapter 6.95 of the California Health and Safety Code require facilities that handle listed regulated substances to develop Risk Management Programs (RMPs) to prevent accidental releases of these substances, U.S. EPA regulations are set forth in 40 CFR Part 68. In California, the California Accidental Release Prevention (CalARP) Program regulation (CCR Title 19, Division 2, Chapter 4.5) was issued by the Governor's Office of Emergency Services (OES). RMPs consist of three main elements: a hazard assessment that includes off-site consequences analyses and a five-year accident history, a prevention program, and an emergency response program.

Affected facilities that store materials are required to have a Spill Prevention Control and Countermeasures (SPCC) Plan per the requirements of 40 Code of Federal Regulations, Section 112. The SPCC is designed to prevent spills from on-site facilities and includes requirements for secondary containment, provides emergency response procedures, establishes training requirements, and so forth.

The Hazardous Materials Transportation (HMT) Act is the federal legislation that regulates transportation of hazardous materials. The primary regulatory authorities are the U.S. Department of Transportation, the Federal Highway Administration, and the Federal Railroad Administration. The HMT Act requires that carriers report accidental releases of hazardous materials to the Department of Transportation at the earliest practical moment (49 CFR Subchapter C). The California Department of Transportation (Caltrans) sets standards for trucks in California. The regulations are enforced by the California Highway Patrol.

California Assembly Bill 2185 requires local agencies to regulate the storage and handling of hazardous materials and requires development of a business plan to mitigate the release of hazardous materials. Businesses that handle any of the specified hazardous materials must submit to government agencies (i.e., fire departments), an inventory of the hazardous materials, an emergency response plan, and an employee training program. The information in the business plan can then be used in the event of an emergency to determine the appropriate response action, the need for public notification, and the need for evacuation.

Contra Costa County has adopted an industrial safety ordinance that addresses the human factors that lead to accidents. The ordinance requires stationary sources to develop a written human factors program that considers human factors as part of process hazards analyses, incident investigations, training, operating procedures, among others.

Discussion of Impacts

VII a - c. Regulations 12-13 and 6-4 are directed toward further reducing fugitive PM and odorous emissions from existing metal working operations. Major modifications are not expected to be required at the existing industrial facilities. The emission reductions associated with adoption of Regulations 12-13 and 6-4 are primarily associated with emissions abatement from point sources, such as an exhaust stack from a furnace or engine (through the use of a control such as carbon adsorption systems or fabric filters), fugitive emission reduction through enhanced capture techniques, and pollution prevention practices that can be used to prevent the emissions of a pollutant, such as reformulations and the reuse or recycling of by-products of production. There are no provisions in the proposed new rules that would increase the total amount of hazardous materials currently used by affected metal working facilities due to the implementation of Regulation 12-13 and 6-4. None of the control equipment or procedures expected to be used as part of the EMPs are expected to introduce, utilize, or generate new hazardous materials at the affected metal working facilities.

Any operations at the affected metal working facilities are not expected to change from current practice and, thus, the amount of hazardous materials used or transported is not expected to change. As the throughput is not expected to change at metal working facilities as a result of implementing Regulations 12-13 and 6-4, no additional transport of the hazardous materials is expected and, thus, no new hazards to the public will be created through transport, use, or disposal of hazardous materials. As a result, the proposed new rules are not expected to increase the probability of a hazardous material release. Local fire department and OSHA regulations coupled with standard operating practices ensure that conditions are in place to protect against hazard impacts. Therefore, no impacts on hazards are expected.

VII d. No impacts on hazardous material sites are anticipated from the proposed new rules that would typically apply to existing operations at metal melting, recycling or shredding facilities within the District's jurisdiction. Some of the affected areas may be located on the hazardous materials sites list pursuant to Government Code §65962.5. However, the proposed new rules would have no affect on hazardous materials nor would the rules create a significant hazard to the public or environment. The affected metal working facilities already exist and are located within the confines of existing industrial facilities. The proposed new rules neither require, nor are likely to result in, activities that would affect hazardous materials or existing site contamination. Therefore, no significant adverse impacts on hazards are expected.

VII e – f. No impacts on airports or airport land use plans are anticipated from the proposed new rules, which would apply to foundries and forges and metal recycling and shredding operations. The metal working facilities already exist and are located within the confines of industrial facilities. Once the proposed new rules are implemented, facilities would be expected to comply by using fugitive emission reduction and pollution prevention practices. These changes are expected to be made with the confines of the existing metal working facilities. No development

outside of existing facilities is expected to be required by the proposed Regulation 12-13 and 6-4. Therefore, no significant adverse impacts on an airport land use plan or on a private air strip are expected.

VII g. No impacts on emergency response plans are anticipated from the proposed new rules that would apply to existing metal working facilities. The foundries and forges and metal recycling and shredding operations already exist and are located within the confines of existing industrial facilities. The proposed new rules neither require, nor are likely to result in, activities that would impact the emergency response plan, and any new development would consider emergency response as part of the City/County General Plans prior to approval. The affected facilities already store and transport hazardous materials, so emergency response plans already include hazards associated with potential incidents. Therefore, no significant adverse impacts on emergency response plans are expected.

VII h. No increase regarding hazards related to wildfires are anticipated from the proposed new rules. The metal working facilities affected by the proposed new rules already exist and are located within the confines of existing industrial facilities. Native vegetation has been removed from the operating portions of the metal working to minimize fire hazards. Any modifications will occur within the confines of the existing facilities. Therefore, no increase in exposure to wildfires will occur due to the proposed Regulations 12-13 and 6-4.

Based upon these considerations, no significant adverse hazards and hazardous materials impacts are expected from the implementation of Regulations 12-13 and 6-4.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HYDROLOGY AND WATER QUALITY.					
Would the project:					
a)	Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☑
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☑	☐
c)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation onsite or offsite?	☐	☐	☐	☑
d)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite?	☐	☐	☐	☑
e)	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☑
f)	Otherwise substantially degrade water quality?	☐	☐	☐	☑
g)	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☑
h)	Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☑
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including	☐	☐	☐	☑

	flooding as a result of the failure of a levee or dam?				
j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and affected environment vary substantially throughout the area and include commercial, industrial, residential, agricultural, and open space uses.

The metal working facilities affected by the proposed new rules are located throughout the Bay Area. Affected facilities are primarily located in industrial areas. Reservoirs and drainage streams are located throughout the area within the BAAQMD's jurisdiction, and discharge into the Bays. Marshlands incised with numerous winding tidal channels containing brackish water are located throughout the Bay Area.

The affected areas are located within the San Francisco Bay Area Hydrologic Basin. The primary regional groundwater water-bearing formations include the recent and Pleistocene (up to two million years old) alluvial deposits and the Pleistocene Huichica formation. Salinity within the unconfined alluvium appears to increase with depth to at least 300 feet. Water of the Huichica formation tends to be soft and relatively high in bicarbonate, although usable for domestic and irrigation needs.

Regulatory Background

The Federal Clean Water Act of 1972 primarily establishes regulations for pollutant discharges into surface waters in order to protect and maintain the quality and integrity of the nation's waters. This Act requires industries that discharge wastewater to municipal sewer systems to meet pretreatment standards. The regulations authorize the U.S. EPA to set the pretreatment standards. The regulations also allow the local treatment plants to set more stringent wastewater discharge requirements, if necessary, to meet local conditions.

The 1987 amendments to the Clean Water Act enabled the U.S. EPA to regulate, under the National Pollutant Discharge Elimination System (NPDES) program, discharges from industries and large municipal sewer systems. The U.S. EPA set initial permit application requirements in 1990. The State of California, through the State Water Resources Control Board, has authority to issue NPDES permits, which meet U.S. EPA requirements, to specified industries.

The Porter-Cologne Water Quality Act is California's primary water quality control law. It implements the state's responsibilities under the Federal Clean Water Act but also establishes state wastewater discharge requirements. The Regional Water Quality Control Board administers the state requirements as specified under the Porter-Cologne Water Quality Act,

which include storm water discharge permits. The water quality in the Bay Area is under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board.

In response to the Federal Act, the State Water Resources Control Board prepared two state-wide plans in 1991 and 1995 that address storm water runoff: the California Inland Surface Waters Plan and the California Enclosed Bays and Estuaries Plan, which have been updated in 2005 as the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. Enclosed bays are indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. San Francisco Bay, and its constituent parts, including Carquinez Strait and Suisun Bay, fall under this category.

The San Francisco Bay Basin Plan identifies the: (1) beneficial water uses that need to be protected; (2) the water quality objectives needed to protect the designated beneficial water uses; and (3) strategies and time schedules for achieving the water quality objectives. The beneficial uses of the Carquinez Strait that must be protected which include water contact and non-contact recreation, navigation, ocean commercial and sport fishing, wildlife habitat, estuarine habitat, fish spawning and migration, industrial process and service supply, and preservation of rare and endangered species. The Carquinez Strait and Suisun Bay are included on the 1998 California list as impaired water bodies due to the presence of chlordane, copper, DDT, diazinon, dieldrin, dioxin and furan compounds, mercury, nickel, PCBs, and selenium.

Discussion of Impacts

VIII a, f. The proposed new rules are not expected to violate any water quality standards or waste discharge requirements, or to substantially degrade water quality, which would apply to existing metal working facilities. The proposed new rules are likely to require additional water use to suppress fugitive dust emission. However, the proposed rules would apply to existing facilities that would already have applicable wastewater discharge permits and storm water pollution prevention plans. The water used for dust suppression would generally be limited to surfaces to increase moisture and minimize fugitive dust emissions. Water application is not expected to result in over-watering such that water runoff would occur. Therefore, no violation of any water quality standards or waste discharge requirements, and no decrease in water quality is expected from the proposed Regulations 12-13 and 6-4.

VIII b. The foundries and forges and metal recycling and shredding operations affected by the proposed new rules already exist and are located within the confines of existing metal working facilities. The proposed Regulations 12-13 and 6-4 may result in an increase in water use by the affected metal working facilities that would choose to implement water suppression activities for fugitive dust control. Groundwater use is generally regulated through agreements and adjudication, which allocates annual water allowance to each user so that aquifer drawdown is prevented. Although the proposed rules may result in an increase in water use, the rules are not expected to result in a depletion of groundwater supplies as the proposed rules are not expected to change the existing water allowance to users. Therefore, the proposed new rules are not expected to deplete groundwater supplies or interfere with groundwater recharge. Therefore, no significant impacts on groundwater supplies are expected due to the proposed Regulations 12-13 and 6-4.

VIII c - f. Metal working facilities are expected to comply with the proposed Regulations 12-13 and 6-4 in the form of point source abatement, enhanced capture techniques, or improved pollution prevention practices. All affected equipment is located in industrial areas, where storm water drainage has been controlled and no construction activities outside of the existing industrial facilities is expected to be required. Therefore the proposed new rules are not expected to substantially alter the existing drainage or drainage patterns, result in erosion or siltation, alter the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite. The proposed rules are not expected to result in an increase in storm water runoff, as no increase in paved surfaces is expected to be required. The existing metal working facilities are subject to the requirements of Storm Water Pollution Prevention Plans and the proposed rules would not alter these requirements. Therefore, the proposed new rules are not expected to create or contribute storm water runoff that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. The proposed new rules are not expected to substantially degrade water quality. Therefore, no significant adverse impacts to storm water runoff are expected.

VIII g – i. The foundries and forges metal recycling and shredding facilities affected by the proposed new rules are located within industrial areas. No major construction activities outside the boundaries of existing facilities are expected due to the adoption of the proposed Regulations 12-13 and 6-4. Metal working facilities are generally located to avoid flood zone areas and other areas subject to flooding. The proposed new rules are not expected to require any substantial construction activities, place any additional structures within 100-year flood zones, or other areas subject to flooding. Therefore, no significant adverse impacts due to flooding are expected.

VIII j. The metal working facilities affected by the proposed new rules are located within industrial areas. No major construction activities are expected outside of the boundaries of existing facilities due to the adoption of the proposed Regulations 12-13 and 6-4. The proposed new rules are not expected to place any additional structures within areas subject to inundation by seiche, tsunami or mudflow. Therefore, no significant adverse impacts on hydrology/water due to seiche, tsunami or mudflow are expected.

Based upon these considerations, no significant adverse hydrology and water quality impacts are expected from the implementation of the proposed amendments to Regulations 12-13 and 6-4.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	**LAND USE AND PLANNING.** Would the project:				
a)	Physically divide an established community?	☐	☐	☐	☑
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to a general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☑
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses vary greatly and include commercial, industrial, residential, agricultural, and open space uses. The facilities affected by the proposed new rules are primarily located in industrial areas throughout the Bay Area.

Regulatory Background

Land uses are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

IX a-c. The foundries and forges and metal recycling and shredding operations affected by the proposed new rules already exist and are located within the confines of existing industrial facilities. The metal working operators may comply with Regulation 12-13 and 6-4 by incorporating air pollution control equipment such as carbon adsorption systems, fabric filters, or enhanced capture techniques, or more likely by adding enclosures to minimize air draft, fences, and fugitive dust suppression equipment. These changes are expected to be made within the confines of existing facilities as it applies to existing equipment, and is not expected to physically divide any established community. Any modifications required for compliance is expected to be constructed within the confines of the existing facilities, and will not conflict with any habitat conservation of natural community plan. No new construction outside of the

confines of the existing facilities is expected to be required due to the adoption of the proposed Regulation 12-13 and 6-4.

Based upon these considerations, no significant adverse land use impacts are expected from the implementation of the proposed Regulation 12-13 and 6-4.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI.	**MINERAL RESOURCES.** Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑
b)	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The facilities affected by the proposed new rules are primarily located in industrial areas within the Bay Area.

Regulatory Background

Mineral resources are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

X a-b. The foundries and forges and metal recycling and shredding operations affected by the proposed new rules already exist and are located within the confines of existing industrial facilities. Any new or modified equipment are expected to be installed within the confines of existing facilities. The proposed new rules are not associated with any action that would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Therefore, no impacts on mineral resources are expected.

Based upon these considerations, significant mineral resource impacts are not expected from the implementation of the proposed new rules.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. NOISE. Would the project:					
a)	Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☑	☐
b)	Expose persons to or generate of excessive groundborne vibration or groundborne noise levels?	☐	☐	☑	☐
c)	Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☑	☐
d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☑	☐
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑
f)	For a project within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The facilities affected by the proposed new rules are located in industrial areas of the Bay Area, which are primarily surrounded by other industrial facilities.

Regulatory Background

Noise issues related to construction and operation activities are addressed in local General Plan policies and local noise ordinance standards. The General Plans and noise ordinances generally

establish allowable noise limits within different land uses including residential areas, other sensitive use areas (e.g., schools, churches, hospitals, and libraries), commercial areas, and industrial areas.

Discussion of Impacts

XI a-d. The foundries and forges and metal recycling and shredding operations affected by the proposed new rule already exist and are located within the confines of existing industrial facilities. The new rules are intended to reduce PM and odorous emissions from these operations. Compliance will be achieved by point source abatement, enhanced capture techniques, or improved pollution prevention practices.

The existing noise environment at each of the affected facilities is typically dominated by noise from existing equipment onsite, vehicular traffic around the facilities, and trucks or other heavy equipment entering and exiting facility premises. Noise from additional equipment installed under the proposed rules is not expected to produce noise in excess of current operations at each of the existing facilities. Any construction activities required due to the proposed to Regulation 12-13 and 6-4 would occur within the confines of the existing facility boundaries. No major construction activities are expected to be required, although minor construction activities would be associated with modifications to existing equipment, construction of air pollution control equipment, or replacement of existing equipment. Construction activities would generally occur during the daytime and avoid the more sensitive nighttime hours. Finally, construction noise sources would be temporary and cease following the completion of construction activities.

It is not expected that modifications to install air pollution control equipment would substantially increase ambient operational noise levels in the area, either permanently or intermittently, or expose people to excessive noise levels that would be noticeable above and beyond existing ambient levels. The facilities that would be regulated by Rules 12-13 and 6-4 already have existing air pollution control equipment. Measures to control fugitive emissions usually do not require additional control equipment but would include measures such as water mists and enclosures to minimize fugitive dust. Therefore, the proposed rules are not expected to result in a substantial increase in equipment that would generate noise. It is expected that each facility affected will comply with all existing noise control laws or ordinances. Further, OSHA and California-OSHA (Cal/OSHA) have established noise standards to protect worker health. No significant noise increases are not expected as a result of implementing the proposed new rules, therefore, noise impacts are expected to be less than significant.

It is also not anticipated that air pollution control devices or other new or modified equipment will cause an increase in groundborne vibration levels because air pollution control equipment is not typically vibration intensive equipment. No grading or heavy earthwork equipment is expected to be required as the affected facilities are already developed and graded. Consequently, the proposed new rules are not expected to directly or indirectly cause substantial noise or excessive groundborne vibration impacts.

XI. e-f. Some of the affected metal working facilities may be within two miles of an airport. However, the affected foundries metal recycling and shredding operations would still be

expected to comply, and not interfere, with any applicable airport land use plans. The proposed rules may require modifications to existing facilities, but are not expected to require development outside the boundaries of the existing facilities. Therefore, the proposed rules are not expected to impact any airport land use plan or expose people residing or working in the project area to excessive noise levels.

Based upon these considerations, significant noise impacts are not expected from the implementation of the proposed Regulation 12-13 and 6-4.

	Potentially Significant Impact	Less Than Significant Impact with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area either directly (e.g., by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	☐	☐	☐	☑
b) Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑
c) Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The areas affected by the proposed new rules are located in industrial portions of the Bay Area.

Regulatory Background

Population and housing growth and resources are generally protected and regulated by the City and/or County General Plans through land use and zoning requirements.

Discussion of Impacts

XII. a. Any construction activities associated with the proposed project at each affected facility are not expected to involve the relocation of individuals, require new housing or commercial facilities, or change the distribution of the population. The reason for this conclusion is that operators of affected facilities who need to perform any construction activities to comply with the proposed new rules can draw from the existing labor pool in the local Bay Area, as no major construction activities would be required. Further, it is not expected that replacing existing equipment with new equipment or installing air pollution control equipment will require new employees to operate the new/modified equipment. Human population within the jurisdiction of the BAAQMD is anticipated to grow regardless of implementing the proposed project. As a

result, the proposed new rules are not anticipated to generate any significant adverse effects, either direct or indirect, on population growth in the district or population distribution.

XII b-c. Because the proposed project includes modifications and/or changes at existing facilities located in industrial settings, the proposed project is not expected to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people or housing elsewhere in the Bay Area. Based upon these considerations, significant population and housing impacts are not expected from the implementation of the proposed project.

Based upon these considerations, significant population and housing impacts are not expected from the implementation of the proposed Regulation 12-13 and 6-4.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES. Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
Fire protection?	☐	☐	☐	☑
Police protection?	☐	☐	☐	☑
Schools?	☐	☐	☐	☑
Parks?	☐	☐	☐	☑
Other public facilities?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area. The areas affected by the proposed new rules are primarily located in industrial areas throughout the Bay Area.

Given the large area covered by the BAAQMD, public services are provided by a wide variety of local agencies. Fire protection and police protection/law enforcement services within the BAAQMD are provided by various districts, organizations, and agencies. There are several school districts, private schools, and park departments within the BAAQMD. Public facilities within the BAAQMD are managed by different county, city, and special-use districts.

Regulatory Background

City and/or County General Plans usually contain goals and policies to assure adequate public services are maintained within the local jurisdiction.

Discussion of Impacts

XIII a. Implementation of the proposed regulations by installing new, or modifying existing equipment, is not expected to change current operations or throughput at existing metal working facilities. Currently, in the event of an accidental release hazardous materials or fire, fire departments are typically first responders for control and clean-up. The proposed rules are not

expected to increase the storage or use of hazardous materials or increase the risk of a fire at affected facilities. The proposed rules are also not expected to change the throughput or overall operations at affected facilities. Therefore, no significant impacts on fire protection services are expected.

Affected metal melting, recycling, and shredding operations are fenced, gated, and access to the facilities is generally controlled for safety and security reasons. Any modifications to the affected facilities are expected to occur within the confines of the existing facilities, which already have restricted access. Therefore, the proposed rules are not expected to result in an increase in police services.

As noted in the "Population and Housing" discussion above, the proposed project is not expected to induce population growth in any way because the local labor pool (e.g., workforce) is expected to be sufficient to accommodate any construction activities that may be necessary at affected facilities and operation of new or modified equipment is not expected to require additional employees. Therefore, there will be no increase in local population and thus no impacts are expected to local schools or parks.

Based upon these considerations, significant public services impacts are not expected from the implementation of the proposed new rules.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☑
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that there are numerous areas for recreational activities. The facilities affected by the proposed new rules are located in industrial areas throughout the Bay Area. Public recreational land can be located adjacent to, or in reasonable proximity to these areas.

Regulatory Background

Recreational areas are generally protected and regulated by the City and/or County General Plans at the local level through land use and zoning requirements. Some parks and recreation areas are designated and protected by state and federal regulations.

Discussion of Impacts

XIV a-b. As discussed under "Land Use" above, there are no provisions of the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments; no land use or planning requirements will be altered by the proposed project. Any required modifications would occur within the confines of the existing metal working facilities so no changes in land use would be required. Further, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities or include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment because the proposed project is not expected to induce population growth. Therefore, no significant adverse impacts on recreation are expected.

Based upon these considerations, significant recreation impacts are not expected from the implementation of the proposed new rules.

	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☑	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established b the county congestion management agency for designated roads or highways?	☐	☐	☑	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☑
d) Substantially increase hazards because of a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☐	☐	☑
e) Result in inadequate emergency access?	☐	☐	☐	☑
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☑

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles). Transportation systems located within the Bay Area include railroads, airports, waterways, and highways. The Port of Oakland and three international airports in the area serve as hubs for commerce and transportation. The transportation infrastructure for vehicles and trucks in the Bay Area ranges from single lane roadways to multilane interstate highways. The Bay Area contains over 19,600 miles of local streets and roads, and over 1,400 miles of state highways. In addition, there are over 9,040 transit route miles of services including rapid rail, light rail, commuter, diesel and electric buses, cable cars, and ferries. The Bay Area also has an extensive local system of bicycle routes and pedestrian paths and sidewalks. At a regional level, the share of workers driving alone was about 68 percent in 2007. The portion of commuters that carpool was about 10 percent in 2007. About 4 percent of commuters walked to work in 2007. In addition, other modes of travel (bicycle, motorcycle, etc.), account for 3 percent of commuters in 2007 (MTC, 2008). Cars, buses, and commercial vehicles travel about 145 million miles a day (2000) on the Bay Area Freeways and local roads. Transit serves about 1.6 million riders on the average weekday (MTC, 2008).

The region is served by numerous interstate and U.S. freeways. On the west side of San Francisco Bay, Interstate 280 and U.S. 101 run north-south. U.S. 101 continues north of San Francisco into Marin County. Interstates 880 and 660 run north-south on the east side of the Bay. Interstate 80 starts in San Francisco, crosses the Bay Bridge, and runs northeast toward Sacramento. Interstate 80 is a six-lane north-south freeway which connects Contra Costa County to Solano County via the Carquinez Bridge. State Routes 29 and 84, both highways that allow at-grade crossings in certain parts of the region, become freeways that run east-west, and cross the Bay. Interstate 580 starts in San Rafael, crosses the Richmond-San Rafael Bridge, joins with Interstate 80, runs through Oakland, and then runs eastward toward Livermore. From the Benicia-Martinez Bridge, Interstate 680 extends north to Interstate 80 in Cordelia. Interstate 780 is a four lane, east-west freeway extending from the Benicia-Martinez Bridge west to I-80 in Vallejo.

Regulatory Background

Transportation planning is usually conducted at the state and county level. Planning for interstate highways is generally done by the California Department of Transportation.

Most local counties maintain a transportation agency that has the duties of transportation planning and administration of improvement projects within the county and implements the Transportation Improvement and Growth Management Program, and the congestion management plans (CMPs). The CMP identifies a system of state highways and regionally significant principal arterials and specifies level of service standards for those roadways.

Discussion of Impacts

XV a-b. Construction activities resulting from implementing the proposed new rules may generate a slight, although temporary, increase in traffic in the areas of each affected facility associated with construction workers, construction equipment, and the delivery of construction materials. Construction activities are expected to be minor and not involve a significant increase in workers or require any substantial equipment. The proposed project is not expected to cause a significant increase in traffic at any metal working facility or require any additional employees. Additionally, the proposed new rules are not expected to have an impact on capacity or throughput at any affected facility. Also, the proposed project is not expected to exceed, either individually or cumulatively, the current level of service of the areas surrounding the affected facilities. The work force at each affected facility is not expected to significantly increase as a result of the proposed project and no increase in operation-related traffic is expected. Thus, the traffic impacts associated with the proposed new rules are expected to be less than significant.

XV c. Though some of the facilities that will be affected by the proposed project may be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, actions that would be taken to comply with the proposed project, such as installing new air pollution control equipment or modifying existing equipment, are not expected to significantly influence or affect air traffic patterns. Further, the size and type of equipment that would be installed would not be expected to affect navigable air space. Thus, the proposed project would not result in a change in air traffic patterns including an increase in traffic levels or a change in location that results in substantial safety risks.

XV d - e. The proposed Regulation 12-13 and 6-4 will not alter traffic patterns or existing roadways. The proposed new rules are not expected to substantially increase traffic hazards or create incompatible uses at or adjacent to the affected facilities. All construction activities, if necessary, will occur within the confines of the existing facilities. Aside from the temporary effects due to a slight increase in construction traffic for those facilities that will undergo construction activities, the proposed project is not expected to alter roads, streets of other transportation systems. The proposed project does not involve construction of any roadways, so there would be no increase in roadway design feature that could increase traffic hazards. Emergency access at each affected facility is not expected to be impacted by the proposed rules. Further, each affected facility is expected to continue to maintain their existing emergency access. Therefore, the proposed rules are not expected to result in an increase in traffic hazards or inadequate emergency access.

XV f. Operation activities resulting from the proposed new rules are not expected to conflict with policies supporting alternative transportation since the proposed rules are not expected to result in an increase in traffic. Therefore, the proposed rules are not expected to affect alternative transportation modes (e.g. bicycles or buses) because the construction and operation activities related to the proposed project will occur solely in existing industrial facilities.

Based upon these considerations, significant transportation/traffic impacts are not expected from the implementation of the proposed Regulation 12-13 and 6-4.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less-than-Significant Impact	No Impact
XVII. UTILITIES/SERVICE SYSTEMS. Would the project:					
a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☑
b)	Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☑
d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements needed?	☐	☐	☑	☐
e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☑
f)	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☑	☐
g)	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☑	☐

Setting

The BAAQMD covers all of Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties and portions of southwestern Solano and southern Sonoma Counties. The area of coverage is vast (about 5,600 square miles) so that land uses and the affected environment vary greatly throughout the area.

Given the large area covered by the BAAQMD, public utilities are provided by a wide variety of local agencies. The affected facilities have wastewater and storm water treatment facilities and discharge treated wastewater under the requirements of NPDES permits.

Water is supplied to affected facilities by several water purveyors in the Bay Area. Solid waste is handled through a variety of municipalities, through recycling activities, and at disposal sites.

Hazardous waste generated at area facilities, which is not reused on-site, or recycled off-site, is disposed of at a licensed in-state hazardous waste disposal facility. Two such facilities are the Chemical Waste Management Inc. (CWMI) Kettleman Hills facility in King's County, and the Safety-Kleen facility in Buttonwillow (Kern County). Hazardous waste can also be transported to permitted facilities outside of California. The nearest out-of-state landfills are U.S. Ecology, Inc., located in Beatty, Nevada; USPCI, Inc., in Murray, Utah; and Envirosafe Services of Idaho, Inc., in Mountain Home, Idaho. Incineration is provided at the following out-of-state facilities: Aptus, located in Aragonite, Utah and Coffeyville, Kansas; Rollins Environmental Services, Inc., located in Deer Park, Texas and Baton Rouge, Louisiana; Chemical Waste Management, Inc., in Port Arthur, Texas; and Waste Research & Reclamation Co., Eau Claire, Wisconsin.

Regulatory Background

City and/or County General Plans usually contain goals and policies to assure adequate utilities and service systems are maintained within the local jurisdiction.

Discussion of Impacts

XVI a, c, and e. Metal working facilities are expected to comply with the proposed new rules by point source abatement, enhanced capture techniques, or improved pollution prevention practices. The proposed new rules are not expected to violate any water quality standards or waste discharge requirements, or to substantially degrade water quality, which would apply to existing metal working facilities. The proposed new rules are likely to require additional water use to suppress fugitive dust emissions. However, the proposed rules would apply to existing facilities that would already have applicable wastewater discharge permits and storm water pollution prevention plans. The water used for dust suppression would generally be limited to surfaces to increase moisture and minimize fugitive dust emissions. Water application is not expected to result in over-watering such that water runoff would occur. No other modifications are expected that could result in an increase in wastewater discharges. Therefore, no increase wastewater discharge, no increase in violation of any water quality standards or waste discharge requirements, and no decrease in water quality are expected from the proposed Regulations 12-13 and 6-4.

XVI b and d. The metal recycling and shredding facilities affected by the proposed new rules already exist and are located within the confines of existing industrial facilities that currently have water supplies. Any modifications would occur within the confines of the existing metal working facilities. The proposed new rules could result in the use of additional water associated with dust suppression activities associated with shredders, open spaces, and stockpiles. About nine months of the year, it is assumed that a facility in the Bay Area could rely on precipitation and collected storm and recycled water (three months for precipitation, six months of collected

water). For the remaining three months, the facility would purchase water from a local utility. Of the total amount of water that may be utilized to minimize fugitive dust emissions, approximately 25 percent is expected to be provided through precipitation, 50 percent from collected water (runoff), and the remaining 25 percent purchased from a local utility. There are only three metal recycling facilities in the Bay Area and only two operate auto shredders. Therefore, the use of dust suppression systems that use water injection to minimize dust emissions is expected to be limited to a few facilities. Therefore, no construction of new water and/or wastewater treatment facilities, or expansion of existing facilities, is expected.

XVI f and g. The proposed new rules would not affect the ability of metal working facilities to comply with federal, state, and local statutes and regulations related to solid waste. No significant impacts on waste generation are expected from the proposed new rules, since the proposed new rules would install, upgrade or retrofit equipment over a period of years. Waste is expected to be limited to metal, in the event that old equipment is replaced with new equipment. Metals are usually recycled so no significant impact to land disposal facilities would be expected.

The proposed project is not expected generate hazardous waste. Metal working processing and procedures are not expected to change as a result of the proposed new rules, and none of the controls developed as part of the EMPs are expected to incorporate or generate additional quantities of hazardous material or waste. Therefore, no significant impacts to hazardous waste disposal facilities are expected due to the proposed new rules. Facilities are expected to continue to comply with all applicable federal, state, and local statutes and regulations related to solid and hazardous wastes.

Based upon these considerations, significant impacts to utilities and service systems are not expected from the implementation of Regulation 12-13 and 6-4.

		Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII.	**MANDATORY FINDINGS OF SIGNIFICANCE.**				
a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☑
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☐	☐	☐	☑
c)	Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☑

18. MANDATORY FINDINGS OF SIGNIFICANCE

Discussion of Impacts

XVII a. The proposed Regulations 12-13 and 6-4 do not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory, as discussed in the previous sections of the CEQA checklist. The proposed new rules are expected to result in emission reductions from foundries and forges and metal recycling and shredding facilities, thus providing a beneficial air quality impact and improvement in air quality. Further, any modifications or upgrades would occur within the confines of existing metal working facilities primary located in industrial areas which have already been graded and disturbed. As discussed in Section IV, Biological Resources and Section V, Cultural Resources, no significant adverse impacts are expected to biological or cultural resources.

XVII b-c. The proposed new rules are expected to result in emission reductions of PM and odors from affected metal working facilities, thus providing a beneficial air quality impact. The proposed new rules are part of a long-term plan to bring the Bay Area into compliance with the state ambient air quality standards, thus reducing the potential health impacts. The proposed new rules do not have adverse environmental impacts that are limited individually, but cumulatively considerable when considered in conjunction with other regulatory control projects. The proposed Regulations 12-13 and 6-4 are not expected to have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly. No significant adverse environmental impacts are expected.

CHAPTER 4

References Cited

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CEQA Comments and Responses

Proposed Regulation 12, Rule 13: Foundry and Forging Operations and Proposed Regulation 6, Rule 4: Metal Recycling and Shredding Operations

Staff received one comment on March 29, 2013 from Roger Lin, Staff Attorney at Communities for a Better Environment, stating that adoption of the proposed Regulation 12, Rule 13 would have a significant negative environmental impact. The comment did not reference the CEQA analysis.

Draft Rule 12-13 Will Have a Significant and Negative Effect on the Environment

CBE commends the District for conducting a Socio-Economic Impacts analysis of the adoption of Rule 12-13 pursuant to California Health and Safety Code § 40728.5. That analysis, however, seems to suggest that emissions control measures in an EMP would only be required to the extent they are below 10 percent of a facility's profit. Specifically, the "analysis … calculates the compliance costs as a percentage of profits to determine the level of impact. BAAQMD uses the ARB's 10 percent threshold as a proxy for burden." However, and related to the need for a case by case analysis by the District as illustrated below, as data becomes available at inspection and analysis of each individual foundry at the EMP approval stage proposed by Draft Rule 12-13-405.5, it is imperative that the District perform a more comprehensive and facility specific socioeconomic impact analysis in deciding whether to approve a facility's EMP. To be clear: CBE does not agree with the use of 10 percent of facility profit as a proxy for whether emission measures are feasible.

While it correctly concludes that the Proposed Rule's contemplated EMPs will not impose an unreasonable cost on individual facilities or the region as a whole, the Socio-Economic Analysis lacks any assessment of the cost of failing to address pollution from these facilities. The dollar costs of excess PM2.5 and pollutants are astronomical, even looking solely at the costs of diagnosed illness. The District should further consider this fundamental cost of pollution, if not at the Rulemaking stage, certainly at the EMP approval stage as outlined below.

Staff Response: CEQA case law has clearly established that a proposed project's adverse impact on the environment is to be measured against the existing environment, not measured against what a commenter may prefer that the proposed project accomplishes. The commenter does not suggest a specific adverse impact from the adoption of the proposed rule, but rather suggests that the District needs to perform a more comprehensive socio-economic analysis for each facility in order to assess the viability of potential emission control measures, and further suggests that the costs of uncontrolled pollution should be considered.

The commenter appears to misunderstand the intent of the socioeconomic analysis. Staff analyzed a number of control measures that have been adopted at Bay Area facilities subject to the proposed rule. Clearly, the cost of these measures has been able to be absorbed by the particular facilities. However, the point of the case studies was to emphasize that control measures that have been adopted and may be considered as part of the emissions minimization plans will be tailored to each facility and that measures that may be economically feasible for one facility may be not feasible for another. To that extent, staff agrees with CBE that individual facilities' circumstances should be considered when making recommendations to plans. It is for this reason that the proposed rules specify that plans be developed for individual facilities. Neither the provisions of the rule nor the staff report state that a specific percentage of a facility's profits will be used to determine the feasibility of a control measure. Staff has considerable experience calculating costs in rule development and permit determinations. Costs and the

technical feasibility of a control measure, as well as any impacts on worker health and safety will all be considered in developing recommendations to emissions minimization plans.